

NUMBER 1557 25c

MOTOR TREND '58 CARS!



Illustrated
car-by-car
report on

ALL
'58 makes

See page 18

9 FOREIGN CAR TESTS!

CUSTOM
SENSATION!

A laboratory
on wheels

page 51



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MOTOR TREND

VOL. 9, NO. 9 • SEPTEMBER 1957

special	CAR-BY-CAR REPORT ON ALL '58 CARS . . . 18
	MT's crystal ball reveals Detroit's plans
late news	CUSTOM SENSATION: A LABORATORY ON WHEELS 51
	College instructor dreams up unique car
road tests	SPOTLIGHT ON DETROIT 8
	Aluminum makes its bid as metal for future cars
	AS WE GO TO PRESS 73
	Latest gleanings from the world automotive scene
foreign cars	ROAD TESTS OF NINE FOREIGN CARS:
	Fiat 600 and Multipla 28
	Fiat 1100 and 500 30
	DKW 32
	MG-A Coupe 34
	Triumph TR-3 36
	Volvo PV-444 38
	Vauxhall Victor 40
	DRIVING AROUND 48
	Special experimental Corvette arouses many conjectures
customs	EUROPEAN RUMOR MILL 41
	HILLMAN "ESTATE CAR" 42
classic cars	CUSTOM INTERIORS 54
antique cars	Pointers on dressing up the interior of your car
motor sports	DETTRICK STEAM CAR 59
	MODEL T TO MONGOLIA 26
	Delivering a T across the Gobi Desert to the Tasha Lama
technical	WHICH WAY DID THEY GO? 58
	Camera catches sports cars swapping ends at Cumberland races
	MONZA 500-MILE RACE CONFOUNDS CRITICS 60
	Americans walk away with all major cash awards
	THE 24-HOUR STRUGGLE 62
	Jaguars make clean sweep at Le Mans
departments	PRODUCT USE TESTS:
	Leather Kleen and Fabric Kleen 10
	Traction Master 42
	HANDY HINTS 44
	THEY PROMISED ME 85 MPG 50
	How good are the gas-saving and power-upping devices?
	QUESTIONS FROM READERS 64
	MEMO FROM THE EDITOR 4
	LETTERS 6
	RUMOR MILL 14
	CAR OWNER'S LIBRARY 16
	MOTORING ACCESSORIES 66
	SELL 'N' SWAP 70

NEXT MONTH: How Good Is the New Edsel?

Buy a '57 Car Now?

"I Drove a Gas Turbine Car!"

Bigger Fins for Chrysler?



(Advertisement)

McCulloch Supercharger

3 > Tips



by
John Thompson

With the mercury up near the 100 mark in many parts of the country, the problem of vapor lock is pretty widespread among owners of all types of cars. In fact, I've had a number of letters in recent weeks from readers who want to know what they can do to avoid this annual problem.

One of the best ways I know to head off vapor lock is by boosting primary fuel pressure, either with a heavier spring in the mechanical pump or through the addition of an electrical fuel pump. Either way, though, you'll be wise to install a McCulloch pressure regulator as a means of controlling the added fuel pressure.

Speaking of pressure regulators, we have them in two models: 1) The Standard, with fixed setting, for stock passenger cars and for supercharged cars not used in competition and 2) The High Capacity Model, with adjustable pressure setting, for modified and competition cars, blown or unblown. Either one will go a long way toward helping solve the problem of vapor lock.

Those hard-working Granatelli brothers—Andy, Joe and Vincent—have expanded their busy McCulloch supercharger distributorship at 5150 N. Western Ave. in Chicago to include marine engines as well as automotive. Formerly known as Grancor Automotive Specialists, the Granatellis' firm now goes under the name of Automarine Specialists, Inc., to reflect their expanded operation.

Active as owner-mechanics at Indianapolis and many other major speed events for years, the Granatellis are also real pros at boosting the performance of ordinary passenger cars. Just a few weeks ago, for example, Vincent took his '56 Mercury with McCulloch supercharger up to a blazing 112.56 mph in the quarter-mile "A" Gas event at Chicago!

Judging from the reports out of Detroit, it won't be long before the 1958 model cars are unveiled. Several makes, we understand, are due for significant changes—in appearance as well as under-the-hood. Others, of course, will undergo just minor face-lifting. All of them, though, are expected to be easy on the eyes.

As far as we're concerned, we're hard at work in our new plant developing improved McCulloch superchargers for the '58 cars. Shortly after these new autos reach dealer's showrooms, we'll be able to supply McCullochs to owners who want the last word in performance. As you know, these competition-proven blowers add up to 40% to a car's horsepower output with no loss in smoothness or reliability.

If you want to step up the performance of your car, just write to me, John Thompson, Paxton Products, 929 Olympic Blvd., Santa Monica, Calif. Tell me the make and year of your car, carburetor type and the power equipment you have. I'll send you all the details promptly, including price, the name and address of your nearest McCulloch dealer and a free illustrated folder.

MEMO

from the editor

The Foreign Car "Invasion"

IF THERE'S EVER BEEN a greater change in attitude toward the "invasion of this country by European small cars," we've seen it now. The fact that no less a colossal automotive empire than General Motors designs to dip its fork into the small slice the imported car manufacturers take of the pie made up by American car buyers' dollars indicates a direct about-face from a few short months ago. At that time General Motors was still "not concerned with the small sales of the imported cars."

Now it's a different story.

The why of it must be purely economic: In 1954 total U.S. registration of foreign cars was 25,385. In 1955 that figure doubled with 51,658. Last year it almost doubled again—to hit 91,042. Estimates for 1957 are as pessimistic as 125,000, as optimistic as 150,000. Either way, it would be over two per cent of the total market.

Volkswagen, of course, accounted for more than half the imports last year, but with the many new models coming in, there may be a percentile slackening of their import growth. Fiat, one of the world's largest automobile producers, intends to flood the American market with at least five, and possibly six, distinctly different models ranging in price from just over \$1000 to \$2495 P.O.E. Within a few months, Fiat imports should be running well over 1000 per month, which would place them third to Volkswagen and Renault.

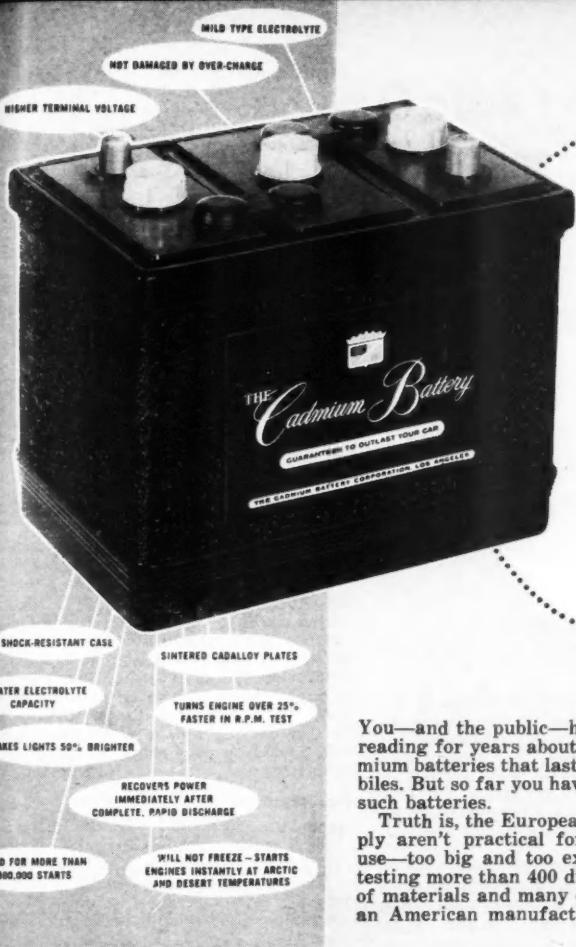
The list of imports is long and impressive—from the A.C. to the Zundapp. If variety is the spice of life, then there'll be no cause to use pepper in place of oregano. The major drawback appears to be in shipping space. Volkswagen and Fiat have their own ships. Others have to wait in line for available space on transports that haul everything from wool to rice.

So with this situation is it any wonder that General Motors has decided to push a quota of up to 2000 Vauxhall Victors and Opel Rekords into this country each month. (making them the second largest importer)? There's no doubt about the fact of their both being good cars. (See page 40 for a road test of the Victor. A test on the Rekord will appear soon.) We feel that at last the sleeping giant has awakened to the fact that the American people's appetite has been whetted for a quality small car with good economy and easy serviceability.

Questions that have been asked of the GM move run the gamut from the ludicrous to the serious: Will these cars, selling for around \$2000, cut into sales of Volkswagen and other imports? Will the American public buy a "foreign" GM-built product? Does this mean GM will not now build a small car? Can American dealers service "foreign cars"? Does this mean that GM has finally conceded that the small foreign car is here to stay?

That the small foreign car is here to stay seems without question. With the advantages you gain from a small car's size, enabling you to whip through traffic with greater ease and at a half or a third the cost of driving a domestic car, why shouldn't they remain? Their importance to the American motoring public is borne out not only by GM's franchising of Buick and Pontiac dealers to handle Opels and Vauxhalls, but also by the Ford Motor Company's intended 20,000-unit sales push of their English Fords and the recurring rumor that Chrysler is next. And in a small way by our allotment of 13 pages to road tests and drivescripts of the newest models. In the months to come, we'll keep you abreast of other developments. The "foreign car invasion" has just started.

John Thompson



ANNOUNCING!

The Cadmium Battery

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You—and the public—have been hearing and reading for years about European-type Cadmium batteries that last longer than automobiles. But so far you haven't been able to buy such batteries.

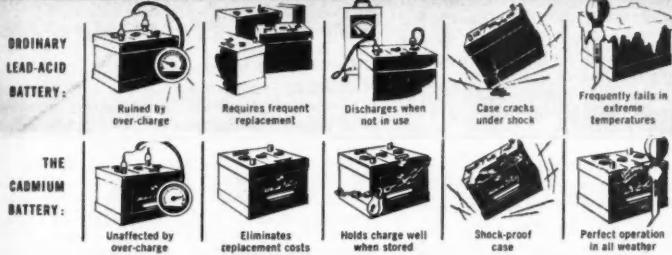
Truth is, the European-type batteries simply aren't practical for ordinary motoring use—too big and too expensive. Now, after testing more than 400 different combinations of materials and many construction designs, an American manufacturer has at last de-

veloped a Cadmium Battery practical for general motoring use.

This revolutionary new type battery is different from any other American or European battery ever made. It is superior to European-type Cadmium batteries, yet is no larger nor costlier than ordinary batteries!

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The key to the remarkable capacity and long service life of The Cadmium Battery was the discovery of a method of sintering the grids with a newly-developed cadmium alloy. Both the composition of the Cadalloy (derived from cadmium), as well as the method of sintering, or forming, the grids are original and carefully guarded secrets which are highly important to the performance, characteristics and life of the unique Cadmium Battery.

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LETTERS

WHY DOESN'T CHRYSLER?

Dear Editor:

I have been, since 1946, a staunch Chrysler supporter, and have always felt that it was one or two steps ahead of the rest of the industry so far as engineering was concerned. And it has been just recently that Chrysler products are the most beautiful cars in the land.

Why don't they cover the market with a wider choice of cars—especially a car to compete with the Ford Thunderbird and the Continental? There should be a car priced for every penny's difference between \$2000 and \$13,000. If Chrysler really wants to get a large share of the GM sales, I can see no other way than this.

James Garfield

Burbank, Calif.

Dear Editor:

For many years I have been puzzled by the method of operation which is used by the Chrysler Corporation. When, a while ago they were having a hard time selling the cars that they produced, they were stuck with an enormous stock of cars. Now that they are able to sell all the cars they can produce, they can't produce all the cars they can sell. It begins to look as though the Chrysler Corporation as a whole is not interested in competing with the other automobile manufacturers.

I think that no one knows how to produce better automobiles than Chrysler, but it seems that everyone else knows better how to sell them. Chrysler always comes up with special models that, if produced, would set the automotive world on fire. These cars are shown to the public for approval. The public then approves the cars, whereupon Chrysler immediately retracts them and files them away, and they are not seen again. (Remember the K-310, Plymouth X-500 and the Dodge Firearrow and many more?)

The Chrysler Corporation seems to be first with everything that the engineers want, and last with everything that the average public wants.

Richard Dean

Los Angeles

WORD FROM WALES

Gentlemen:

My co-mechanics would like to know how the status of a motor mechanic in the U.S. compares with a mechanic in other branches of industry. Here in England we are not rated as high as a shipbuilding or mining workshop mechanic. A skilled motor mechanic seldom gets more than about \$28 per 44-hour week. How about yours? A letter from a mechanic would be appreciated.

Alex Craig

Aldo, Bevan Ave.
Colwyn Bay
Denbigshire, Wales

Maywood, Ill.

A REFRESHING CHANGE

Dear Sir:

Back in '55 I was impressed with your write-up on the Buick Century so I bought one. After almost 15,000 miles the transmission went out to the tune of \$124.99, so I wrote to the Chicago Buick Regional Office.

Imagine my surprise when I received a rebate check for \$96.10 . . . after almost two years when one would suppose the warranty had run out, even though there was little mileage on the car. If this is typical of Buick service I shall stick with them.

Anthony Braus

Maywood, Ill.

CUSTOMIZED CONVULSIONS

Dear Sirs:

I have a major gripe about one section of MT—the so-called "Custom Cars." It seems that all that is necessary to receive undeserved attention in this section is to buy a collection of junk and make changes in it. I regret to say that not one in 10 makes a nice over-all picture. Chrome and paint do not create beauty in the absence of line. My Crosley has been customized with a White truck grille and '57 DeSoto tail lights.

John Isemann Richmond, Va.

STOP LEAKING

Gentlemen:

Head gaskets can be checked for leakage by adding two spoonfuls of washing bluing to a cup of permanent antifreeze, pouring it into the radiator, tying a white cloth over the tail pipe, and running the engine a short time.

If there is a head gasket leak, the bluing will color the cloth. The antifreeze will also help in locating the leaky trouble spot on the engine.

R. Blagden

E. Hampton, Conn.

DRAGSTRIP DILEMMA

Gentlemen:

I was surprised and disappointed to read that the National Safety Council (in their publication) proposes non-support by local police officials for supervised drag activities. This attitude would seem to promote moonshine dragging. My support is for those who propose, supervise and participate in regulated competitive drag activities.

Edward Williams

Oneida, N. Y.

OLDER AND WISER

Dear Sir:

I own a 1938 Chrysler Custom Imperial. I bought it used four years ago. Since that time I have averaged about 2200 miles driving a month. My car has not needed any repairs other than the usual upkeep. The car is a good performer. I drive it hard and fast

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but still get about 12 mpg in traffic and 17.4 mpg on highways.

The car attracts attention wherever it goes. I don't think they "build them like they used to."

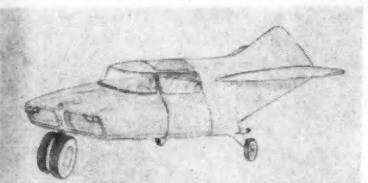
David R. Christensen Arlington, Va.

ROGER . . . OVER AND OUT

Gentlemen:

This idea of mine is an automobile of sorts built for speeds 100 to 150 mph on those future super highways.

The thing would be light, perhaps built of aluminum and magnesium. The engine



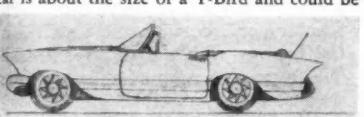
could be 100 hp and the machine would roll on a modified tricycle wheel arrangement driven by the front wheels with the powerplant mounted directly over them. It would be handled conventionally up to 50 mph. At highway cruising speeds, the rear end would be blown off the ground and the controls switched to Automatic for electronic handling.

Kenneth R. King Charleston Hts., S.C.

SPORTING LIFE

Gentlemen:

Here is my design for a sports car. This car is about the size of a T-Bird and could be



built in several models, including convertible, hardtop, station wagon, fastback hardtop, and fastback two-door sedan.

Jim Lewis Arlington, Va.

THE BETTER TO SEE HIM

Gentlemen:

I have a '57 Mercury with reflectors in the rear bumper which I converted to lights. This was accomplished by cutting a two-inch x 19-inch slot in the bumper behind the reflectors and the same size hole in the plate between the reflector and bumper. I fabricated a housing and installed it. Then I installed two tail light sockets in each side and replaced the reflector.

Allen Gentry Chattanooga, Tenn.

RACERS ARE SAFER

Dear Sir:

Our most skillful drivers could show students of driver training programs why a motor vehicle goes out of control and exactly which actions are to be taken to recover control.

Our most skillful drivers are the racing men and many of them are employed by automotive firms which should be vitally interested in traffic safety and willing to retain instructors for such a valuable program.

Larry McInerney Tillamook, Ore.

CORRECTION

On page 24 in the August issue we inadvertently printed obsolete engine and performance specifications for the B.M.W. Isetta. The correct figures are as follows: No. of cylinders—1, Engine type—ohv, Displacement—18.3 cu. in., Bhp—13.0 (rpm not stated), Advertised top speed—62.8 mph, Advertised fuel consumption—62 mpg.

Gates revolutionary Fold-Away Spare Tire saves trunk space

for vacationers, sportsmen,
salesmen, sports car owners



Takes only 1/5 the trunk space of ordinary spare
—makes room for two more suitcases

The Gates Rubber Company — pioneer developers of many new rubber products — now makes a flexible nylon spare tire that folds down to the size of a football and eliminates the need for the ordinary spare tire and wheel entirely.

For families on vacation, especially those with the extra luggage needed for children . . . for salesmen who need more space for samples . . . for those who are going into remote areas and want the extra security of a sixth and even seventh tire . . . for owners of sports cars with extremely limited space . . . for all these and many others, Gates revolutionary new Fold-Away Spare Tire is the answer.

Actually this tire takes up only 1/5 the trunk space occupied by the regular spare tire and wheel. When the neat package containing the Fold-Away Tire is tucked in a corner, there is room for two or

three more pieces of luggage. In many cars trunk space is doubled.

Flat off; Fold-Away on in minutes

The initial purchase of the Fold-Away tire will ordinarily include two other items: a tire changer and an inflator. The tire changer is a simple tool for removing the flat from the wheel without removing the wheel itself. And the inflator is a small cylinder of gas which inflates the Fold-Away in seconds. Anyone who can jack up a car can remove the flat tire and install the Fold-Away in a matter of minutes.

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TPA 261A

SPOTLIGHT

ON

DETROIT

Aluminum offers promise of becoming an all-purpose metal of future cars



by Joe H. Wherry
Detroit Editor

NEW IDEAS EXPRESSED with aluminum was the purpose behind a recent invasion of Detroit by a detachment of stylists and publicists from the headquarters of Kaiser Aluminum. Because one of the master-minds behind the ideas presented was the former Ford stylist, Frank Hershey, and also because the applications of the light metal presented were eminently practical, we thought MT's readers would like a full report.

THE SIX STYLING STUDIES that were presented featured ideas which may very well set a style trend. At least one design, which must remain nameless right now, bears close resemblance to some of the theories being talked about in hushed tones in various quarters in the industry. Other features appear to be extensions of some of the more progressive European experiments seen frequently in recent years. On the whole, however, Kaiser Aluminum's approach to both styling and structural members is most refreshing and worthy of serious consideration.

THE "DEL MAR" has an integral grille and bumper of a single aluminum extrusion with a rubber insert at the forward edge. The headlights, vertically dualized pairs, are recessed behind their own grilles of aluminum which, with the lower cast bumper end sections, also provide the protection at each corner of the front. The very flat, low hood is also cast (it could be extruded) and is textured longitudinally. The hood's ridges could be used as a basis for interesting color possibilities with the high ridges polished after painting. The rear quarter, or fender, sections, provide a sort of flying wing design that also adds torsional rigidity as well as styling originality. Roof interest focuses on the air inlets and very thin side sections to which a transparent canopy is attached.

"MERCED" AND "GRANADA" center attention on fluted, stamped body panels which are anodized in suitable colors.

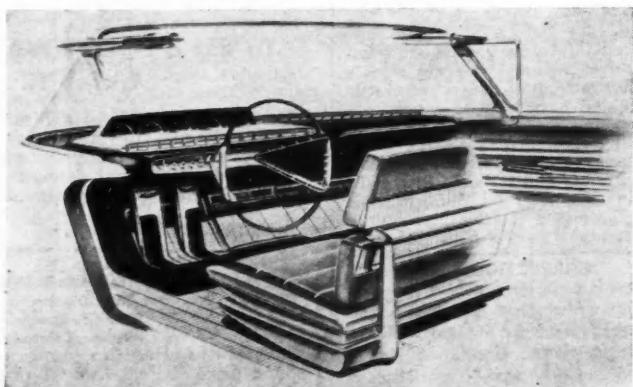
The matching doors are cast, as are the bumpers and wheels, the latter with integral hubs and brake drums. The Merced's roof rolls back into the rear deck leaving the forward canted roof support hoop to give a coupe de ville effect. Kaiser engineers suggest either power or hand roof retraction, the latter for simplicity and because of the lightness of aluminum. The Granada features the exhaust mufflers mounted forward of the front wheels, deflecting the exhaust downward and outward. The bubble canopy provides all-around view except for the interruption of the stub fins, which carry the turn signal lights. Each car has wheel housings integral with the stamped side panels.

THE "FAIRMONT" EMPHASIZES variations possible with aluminum and contrasts the smooth stamped door panel with the textured front and rear quarter panels. Again the wheel wells are stamped aluminum and the edges are polished for accent. The sliding roof combines extruded and formed sheet sections while the windshield frame and rear top strut are forged. Bumpers are cast, as are the light-weight wheels, with

air cooling for the integral brakes. The aircraft-related finlets are the rear support for the antenna, could mount signals, but one questions the dart-like points on such a low car.

"GOLDEN GATE" is an ultimate in station wagons. The door is of a roll-down type fabricated from narrow extrusions which are locked together with flexible plastic strips which supply water and weatherproofing. The Golden Gate's wheel wells feature a rigid aluminum stamping covered with colored vinyl in the hollows with the ridges polished. The forward section of this futuristic wagon's roof slides back. Color anodized aluminum is used for the entire upper structure with enamelled steel for the lower side panels.

THE ALL-ALUMINUM CAR is exemplified by the "Piedmont" which, alone in the group, uses the straight-through styling culminating in fins. Not available were prints duplicating what we saw on a wide screen: a step-by-step sequence showing the car being theoretically built from the ground up. Several cast aluminum sections were bolted together (on



X-A1 INTERIOR is all aluminum. Casting integrates firewall and toeboards. Instrument panel markings are cast in metal.

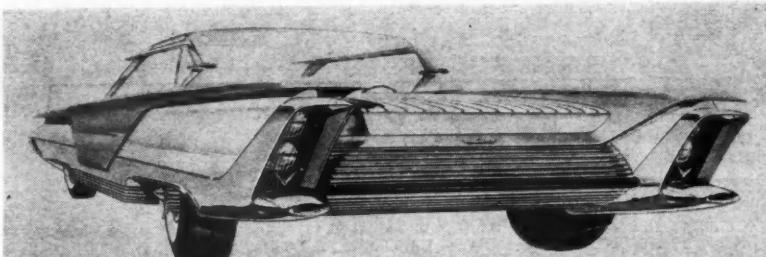
the screen) to form an integral firewall, dashboard, floor pan, and main frame side rails that reminded us of the structure used in recent Hotchkiss-Gregoire and Panhard cars. It will be remembered by some that Kaiser, when he was manufacturing cars, sought out the Frenchman, Gregoire, and that the all-aluminum car was rumored strongly several years ago.

EXPOSED FRAME RAILS are used on the "Piedmont" to furnish textured styling as well as torsional rigidity. Ahead of the front wheels can be seen, again, the muffler exhaust outlet of finned aluminum. The wheel wells are made integral with the frame and floor section by, Kaiser states, bolting or by welding. The roof is a three-piece affair that retracts and drops behind the rear seat. Bumpers are cast aluminum. The seven exhaust-like openings protruding beneath the rear bumper are not explained. From the rear quarter view the headlight hoods look remarkably like those on the '57 Imperial while the fins have a similar relation in appearance.

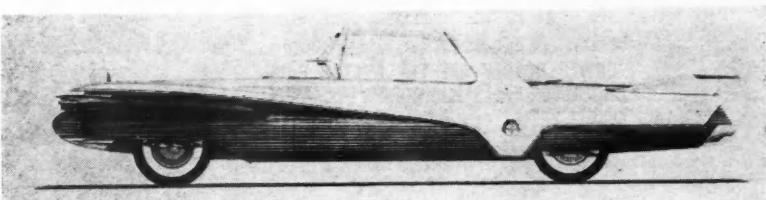
HOOD AND REAR DECK that roll back like the old roll top desk are formed as were the doors on the preceding Golden Gate's wagon. In our opinion the "Piedmont" has features almost certain to be seen on cars in the '59-'61 era. We're certain also that this firm, now pushing the styling and structural possibilities of aluminum and other light alloys, has learned much from certain European designers who, it must be admitted, are years ahead in automotive thinking.

THE X-A1 INTERIOR is a styling and engineering experiment devoted to the area combining the firewall, the floorboard, and seat frames. It's all aluminum: a big casting integrates firewall, the toeboards, and instrument panels with the numbers and other markings cast right into the metal of the instrument grouping. Cast into the floor board are the supports for both front and rear seats and the texture of the floor itself. The seatbacks shown are of two sections which can be controlled for the greatest back comfort. The two pedals, accelerator and brake, are of aircraft type. The steering wheel is deeply dished with only a stub of a column coming out of the dash. No transmission controls are shown, but they could be functionally arranged horizontally in a single row on the rectangular hub. The strength of the cockpit could be assured by the proper light metals alloyed and the durability and beauty with color anodizing surpasses anything of conventional design yet achieved.

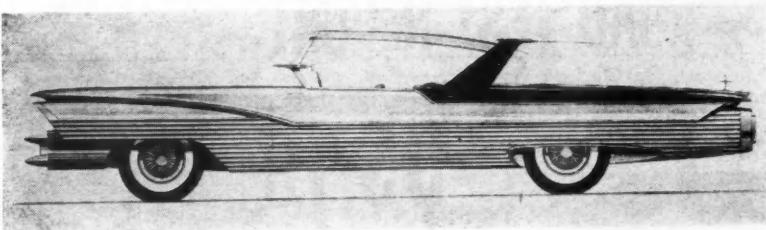
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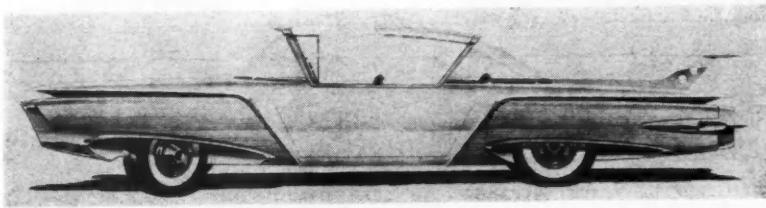
"DEL MAR"



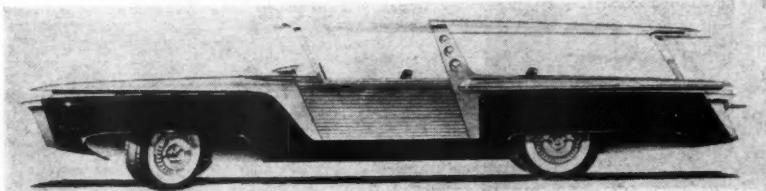
"MERCED"



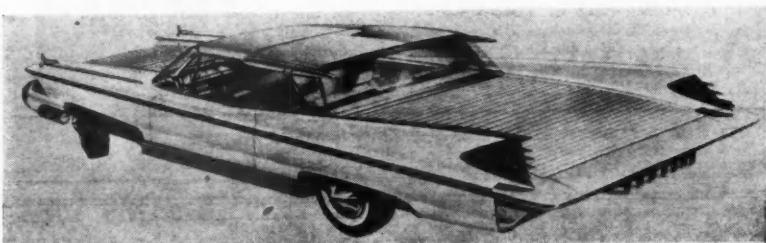
"GRANADA"



"FAIRMONT"



"GOLDEN GATE"



"PIEDMONT"



» *Jim Whipple* — CAR LIFE

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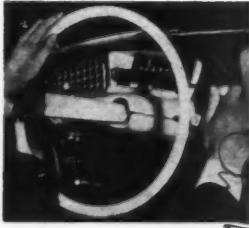
» *John R. Bond* — ROAD & TRACK
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» ROAD TEST REPORTS

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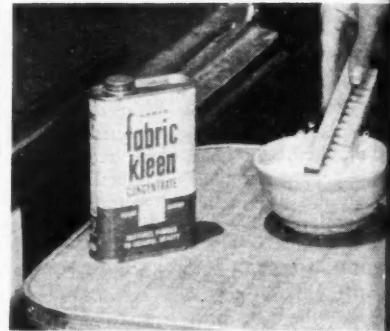
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C

PRODUCT USE TEST

Fabric Kleen and
Leather Kleen

THE CAR OWNER who takes a reasonable amount of pride in the care of his automobile will appreciate the facts to be learned about cleaning interior upholstery—whether it be leather or fabric—in our product use test reports.



Ordinary daily use, in addition to the natural deterioration caused by the sun, wind and rain, will make almost any type of upholstery covering dull and dirty. Keeping it spot-free, clean and as "good as new" takes a little time and effort; but with the right cleaners the job not only is simplified but can result in a much longer life for the material and general good appearance of the car.

Today, vinyl plastics are used extensively for interior coverings in U.S. cars, replacing genuine leather and fabrics to a considerable extent. Many English and foreign cars, however, continue to use the soft, untreated leathers; these require more care than the Ortholite-covered leathers and vinyls of U.S. cars, simply because they do not have that extra protective coating afforded by the Ortholite treatment.

Using a vinyl-covered seat in a '57 Ford station wagon, we made a comparison test between an ordinary soap-and-water solution

T R O Ë N



USE

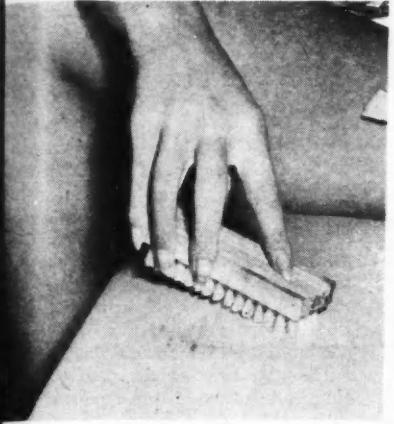
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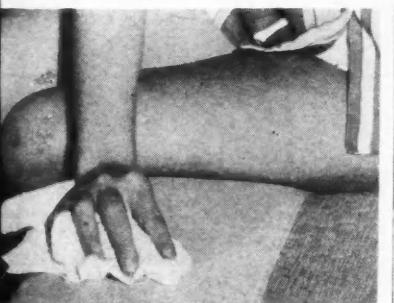
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the Or-

'57 Ford
parison test
solution



and Leather Kleen, a product which contains saddle soap, neatsfoot oil, beeswax, and Carnauba wax. The soap and water took the scum off all right, but the vinyl had a dull appearance when it dried. By contrast, the area treated with Leather Kleen not only took less effort to clean by simply applying a small amount to a stiff brush and rubbing the surface in a circular motion, but it also gave the finish a rich tone. Noticeable was the fact that the vinyl definitely had a water-repellent quality, due to the wax contained in the Leather Kleen solution. Thus, not only does this solution act as a cleaning agent, but it also serves as a protective coating. Incidentally, Leather Kleen has been tested and approved by the U. S. Rubber Company for use on Naugahyde and by the Leather Manufacturers of America.

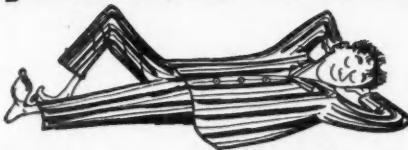


Checking out its companion product, Fabric Kleen, required a slightly different procedure. Mixing one part of Fabric Kleen with two parts of warm water in an open container created a foam or lather. The lather only was applied with a brush to the soiled fabric door paneling of a '50 Buick sedan. The nap of the upholstery was brushed back and forth, covering one small area at a time, overlapping to blend in the cleaned areas. Wiping each area dry with a clean absorbent towel resulted in a new, freshened look to the upholstery paneling.

According to the manufacturer, Fabric Kleen contains both soap and solvent in an emulsion base. This we proved makes an effective cleaner for the removal of grease and oil, as well as water-soluble stains; but one word of caution: Apply lather on a hidden area first to be certain your upholstery is color-fast.

—James E. Potter

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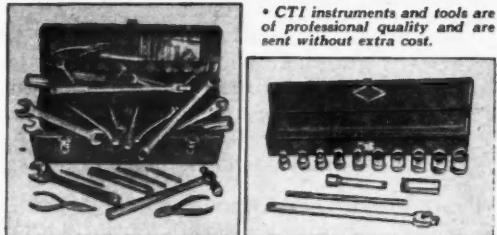
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SPOTLIGHT ON DETROIT

continued from page 9

ALUMINUM WHEELS are a distinct possibility for '58 and beyond. Kaiser has developed one, to be die cast as an integral unit including hub and brake drum. Aluminum offers the advantages of improved brake performance, greater strength and lighter weight. Design of the die-cast wheel eliminates separate wheel disc and hub casting, which are combined with the brake drum to form a strong but light-weight structure. The rim is the demountable type, held in place with chrome plated rim clamps. The prototype wheel, complete with 14-inch diameter steel rim, weighs only 30 pounds as compared with 42.6 pounds for a steel wheel, hub and brake drum assembly, a weight saving of 12.6 pounds or approximately 30 per cent.

Mechanical tests show substantially less brake fade, attributed to aluminum's ability to dissipate heat rapidly and to radial ribs on the surface of the wheel to establish direct air flow over the periphery of the drum. The braking surface of the wheel can be either a metallurgically bonded iron liner, or a metallurgically bonded metal spray liner. The prototype wheel is the result of 2½ years of design and research.

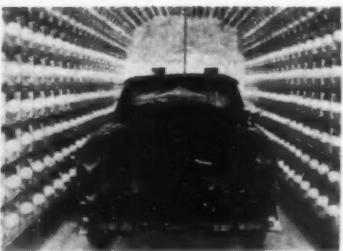


DIE CAST aluminum wheel has integral
brake drum and weighs only 30 lbs.

ENGINE BLOCKS OF CAST ALUMINUM are now a reality. An in-line six design was shown by Kaiser engineers. When asked about the possibility of casting a V8 block at an early date, Kaiser stated that studies were under way to determine the feasibility of such an enterprise. What is not generally known is that V-type blocks of aluminum have already been experimentally cast in halves which are then welded together. Wet steel sleeves are used, but some engineers believe that eventually cylinders of light alloys are entirely possible. (The V-type block referred to above has been seen by this writer—it is not a Kaiser project, and it certainly signifies that the day of aluminum is rapidly approaching.)

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"General Motors came close to ordering 1959 tooling for the '58 line of Buick and Oldsmobile in order to recuperate '57 losses."

FALSE—Pure scuttlebutt of the most fanciful sort. Fact is that the '57 dies have been so successfully reworked for '58 that such a drastic move would have been completely unnecessary, as well as uneconomic.

"Ford International will import the German-built Taunus cars to offset GM's importation of the Opel."

QUITE LIKELY—Since it would give FeMoCo's four-divisional dealers another complete line of small cars in addition to the British-built lines.

"GM will import their Australian-built Holden."

FALSE—The distances involved and the model confusion at the dealer level, to say nothing of the customers' viewpoints, make this an unrealistic prospect. Furthermore, GM Holden, Ltd. has not yet been able to produce the Australian car in sufficient quantity to meet the home demand. Australian economics do not greatly depend on the export of mechanical items.

"Success of British-built Fords on the European mainland has been such that the Cologne outfit is preparing a more snappy performing model."

TRUE—A new Taunus to be unveiled soon will have a 1.7-liter engine, enough larger than the current 1.5-liter plant to provide considerably better performance at no sacrifice in economy.

"Chrysler Corporation's 1958 cars in all five lines will feature Chrysler-built ignition system components."

FALSE—Although this would be a switch from the Auto-Lite systems in use for many years and would add considerably to the corporation's engineering prestige, this will not materialize in 1958. Auto-Lite is still the ignition source for Chrysler's 1958 cars.

"Oldsmobile is going all out in '58 to

recapture their lost performance crown and will rely on fuel injection, across the board, to do the trick."

FALSE—All manufacturers will at least start the model year with other selling points besides performance. Secondly, Oldsmobile is not yet convinced that fuel injection is either the answer or is needed to convince the performance-minded that Olds is back in the old groove. But—Oldsmobile will have some equally interesting improvements.

"American Motors will offer disc brakes, as an option, on one of their '58 lines."

FALSE—This line of thought developed recently upon the heels of the talk that AMC's 58's would be "crowd stoppers." Already one of this country's foremost exponents of finned brake drums, AMC will feature improved brakes—but will not go for disc or spot brakes.

"A new ignition development will virtually eliminate underhood fires as far as the ignition system is concerned."

TRUE—But this new item will not be ready for at least another year. Its source, when unveiled, will be as interesting as the item is remarkable.

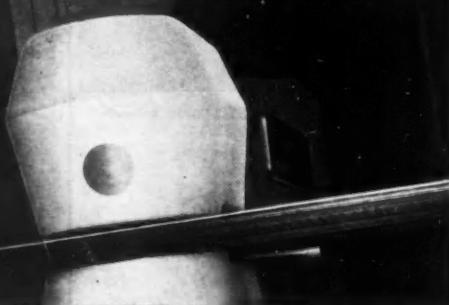
"Chrysler will feature desmodromic valves in one of its five makes as an option."

VERY UNLIKELY—This rumor looked good until the recent industry-wide ban on factory participation in racing. Now there seems to be little need of the extra engineering and production costs this would involve since every current make is admittedly more than fast enough for Mr. Average Driver.

"Chevrolet will offer, optionally at extra cost, a four-speed synchromesh gearbox in '58 for all their cars—not just Corvette."

VERY LIKELY—This should put the fun back into driving for performance enthusiasts who like to shift gears. From all present indications, there seems to be a healthy number of gear shifters still buying new cars.

THROUGH THE
ATOMIC EYE OF
AccuRay®

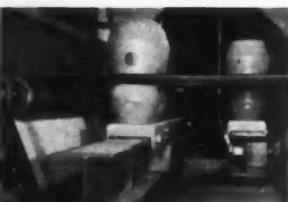


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P.S. Golfers—you'll never know how good you are until you play a Dunlop ball.
16 MOTOR TREND/SEPTEMBER 1957

car owner's



LIBRARY

(In addition to reviewing the latest books on automotive subjects, this column will also present announcements of special catalogs, directories, pamphlets, records, etc. that are of interest to car owners.)

A REAL MUST for any sports car or auto fan are three Riverside long-playing 12-inch records produced and edited by Bill Grauer and Barrett Clark. The first is RLP 5003—*Pit Stop—Behind the Scenes at a Sports Car Race*. It really takes you behind the scenes, to the technical inspection, the drivers' meeting, the practice race, to the starting line, the start, and through a series of pit stops. One of the high points is Phil Hill's Ferrari 3.5 warming up. On it also are interviews with the late Marquis de Portago, Phil Hill, Stirling Moss, Carroll Shelby and Masten Gregory. With a hi-fi set and this record you're in for many minutes of enjoyment that'll lengthen into hours; you'll play and replay it.

The next two are portraits: one, RLP 5004, *Stirling Moss—A Portrait of Britain's Greatest Racing Driver*, and RLP 5007, *A Memorial Tribute—The Marquis de Portago*. The Moss record is told in the No. 2 driver's own words. He expresses his strong opinions about the sport of motor racing, his respect for the genius of Nebauer, the ability of Fangio, his favorite courses, and the qualities that go to make you a race driver.

On the Portago record are conversations with Luigi Chinetti, Juan Fangio, Peter Collins and Count von Trips. Most of the record is in "Fon's" own voice, in which he traces his start only three years before his death at the Mille Miglia in May. A surprising fact is that to him, "Cars are not the interesting part of automobile racing, but rather the ability to go from Point A to Point B faster than anyone else."

If you can't find these three records (and look you should!) in your favorite record shop, at \$5.95 each, write to Riverside Records, 553 W. 51st St., New York 19.

* * *

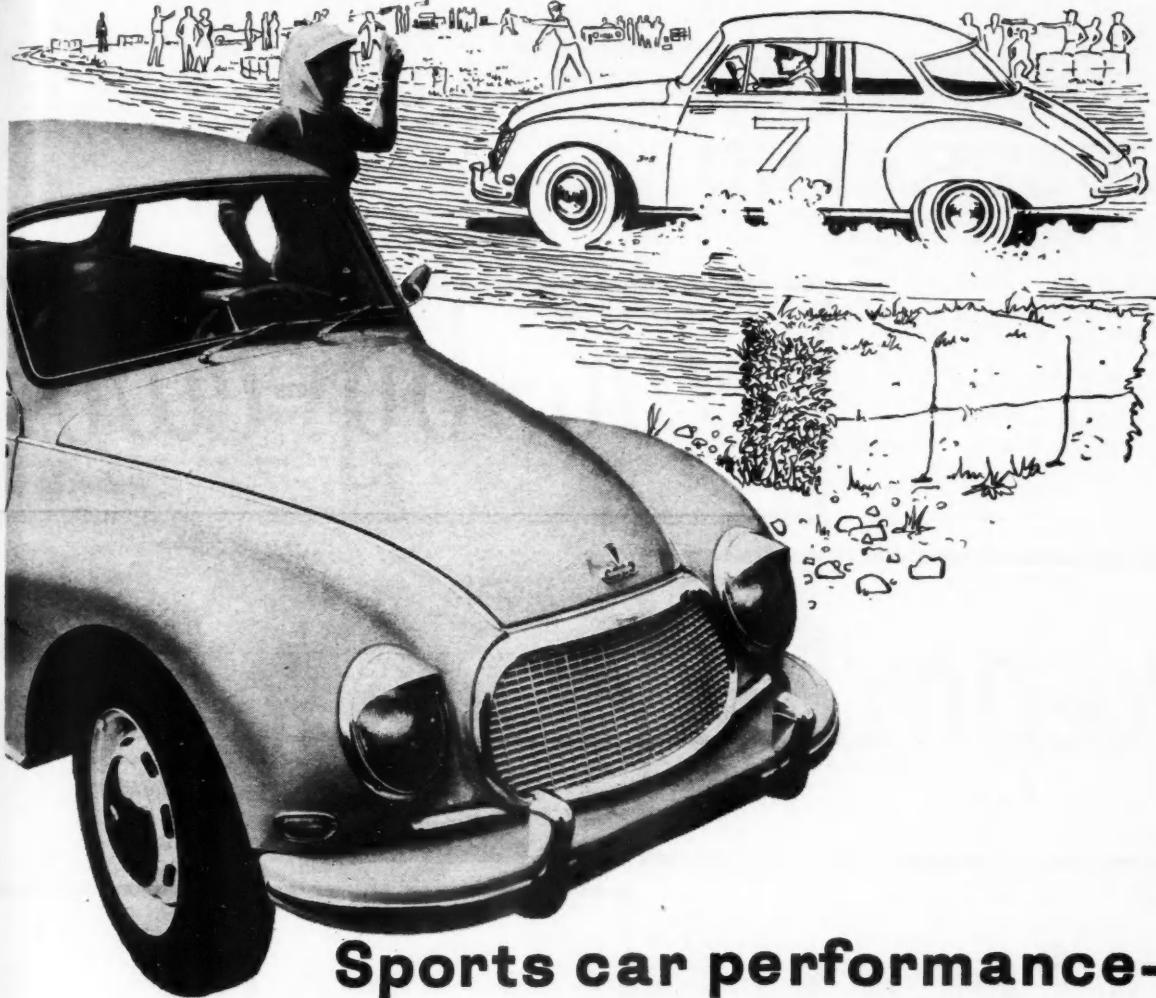
J. C. Whitney & Co. has published a new catalog of their complete line of automotive accessories and parts. It's available for 50¢ at 1917-19 Archer Ave., Chicago 16, Ill.

* * *

The Imported Car Service, Box 3310, Rincon Annex, San Francisco, Calif., is scheduling printing of a *Foreign Auto Service Directory* for the MG (TC, TD, TF, 1500). It will describe each of the cars in complete detail, will have lube charts, interchangeable parts lists, and a plastic cover. Single copies will sell for \$1 plus postage, or 50¢ in lots over 20. Similar books (14 in all) are planned; they will cover 90 per cent of cars in use today.

Quo
of 1

FROM



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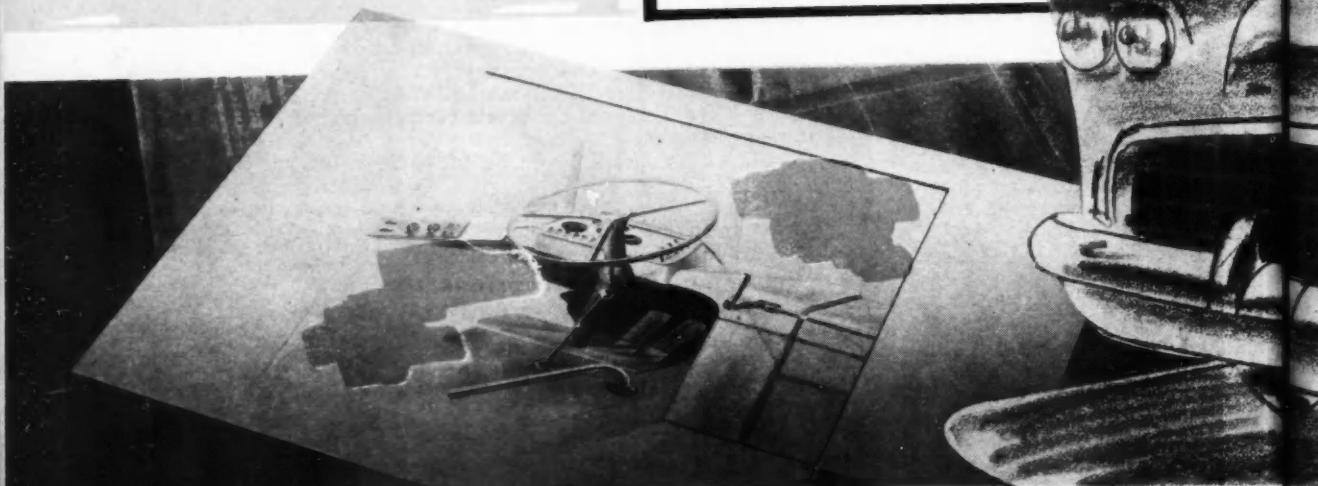
car-by-car

report

on all

'58

cars



ONWARD TOWARD the inevitable clash of ideas and sales features marches Detroit. Within a few weeks after the reader sees these predictions, the conflict will have opened for better or for worse. Best idea of how sales will go in 1958 is now fairly clear: the industry, after two unflush years with sales not quite approaching anticipations, is inclined to look upon '58 as a six-million car year. While Ford and Chrysler have increased their market penetration, American Motors has held just about even with the gigantic General Motors Corporation and the smaller Studebaker-Packard Corporation slipping about six and one per cent respectively.

How then, with the public evidently being fairly well re-equipped with comparatively late models, will the industry lure potential buyers into salesrooms where *radically* new cars do not exist?

The industry, collectively, has made the taking of the public pulse a science scarcely approached by even the most astute pollsters, and, therefore, will offer 20 makes of cars—well under half of them all-new—that represent refinements and advancements based upon established principles to a greater extent than in any previous year.

Here, make-by-make, is the way 1958 shapes up. Taking each manufacturer in alphabetical order, with each make in order of rank, this is how MT's crystal ball sees the picture:

AMERICAN MOTORS

THE RAMBLER, which has been making some quite remarkable sales increases, is slated to be nearly all-new. Expect to see the new 14-inch wheels appear for the first time; this will account for some decrease in overall height, but reworked body dies, possibly new ones, will bring a very modern appearance. The grille is due for redesign, too, and dual headlights will probably be an extra cost option. Some of the present boxy lines will be dispensed with, especially in the station wagons, and the bulge at the rear of the roofline will be eliminated.

by Joe H. Wherry
Detroit Editor

ILLUSTRATIONS BY
RON SIMMONS

Air suspension will be available, in a limited number of the new Ramblers. The torque tube driveline will be retained, and there will be some needed improvements in the automatic transmission to accomplish smoother operation and shifting and a more precise positioning of the column-mounted shift lever. The dashboard will be new and, if our ball is clear, the instruments will feature increased readability.

Horsepower of the Rambler V8 will be increased. Top output, with extra carburetion, will come close to 275 without fuel injection, which AMC recently disclosed has gone out the window in current planning. Rambler will still offer the remarkably economical six-cylinder ohv engine, but it too will have increased compression and power.

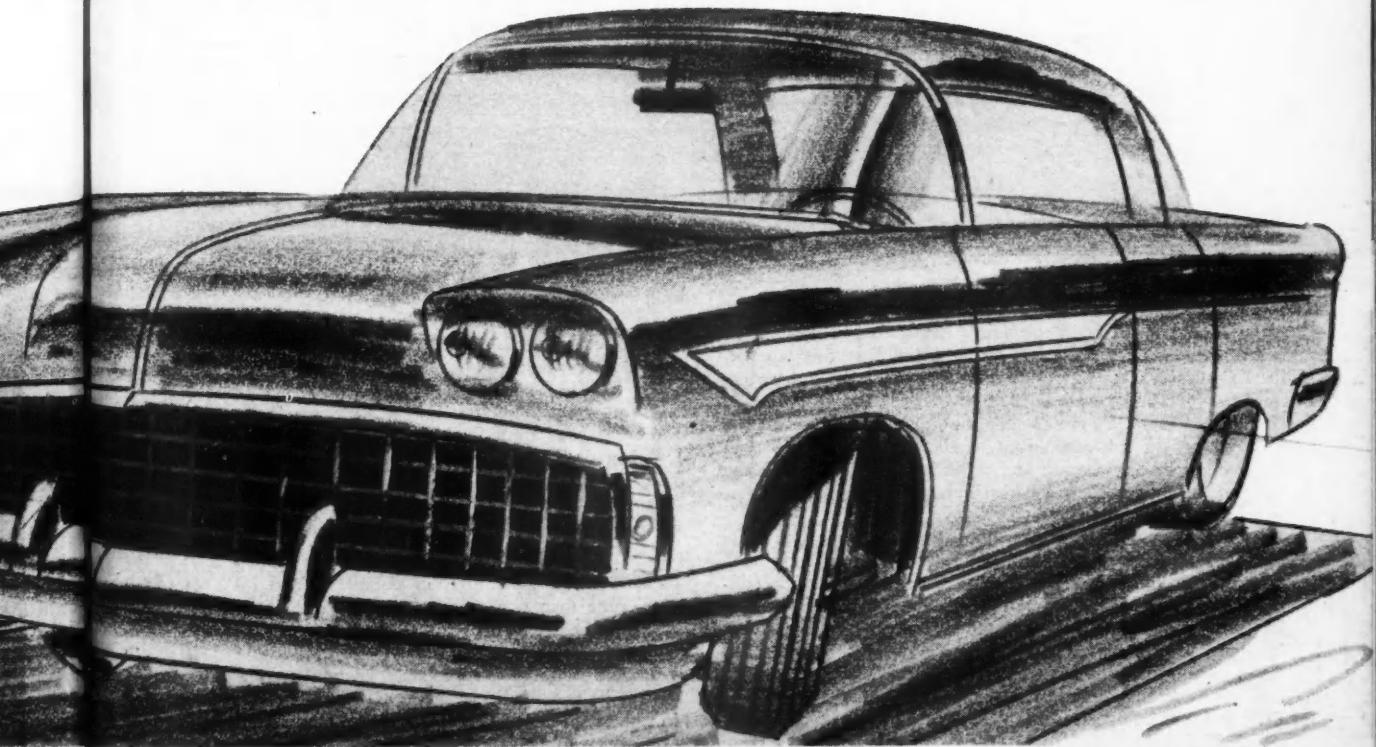
In overall size, Rambler will keep its present dimensions with a 108-inch wheelbase, although a new 100-inch job will be introduced around the end of November. The large Hudson and Nash, however, will make use of the basic Rambler body with lengthened front and rear sections and quar-

ter panels. The Rambler will be without fins, but the senior cars will have them. One will likely feature fins flared outward in dramatic manner but without radicalism. The other's fins will be more vertical in concept, will be distinctive.

THE SENIOR CARS will continue to use the durable AMC V8 engine but with displacement increased over the current 325 cubic inches. Rated power will comfortably exceed 300 and the torque curve will be improved by more efficient manifolding and carburetion.

The overall length of both the new cars will be little changed but the wheelbase will be two or three inches shorter than it is now. Air suspension will be an important option, and air conditioning will be a strong selling point. The two big AMC cars will be very sleek, possibly offer even greater interior space than at present, and will be among the lowest priced medium sized cars in the industry. Dual headlights will

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'58 Previews continued

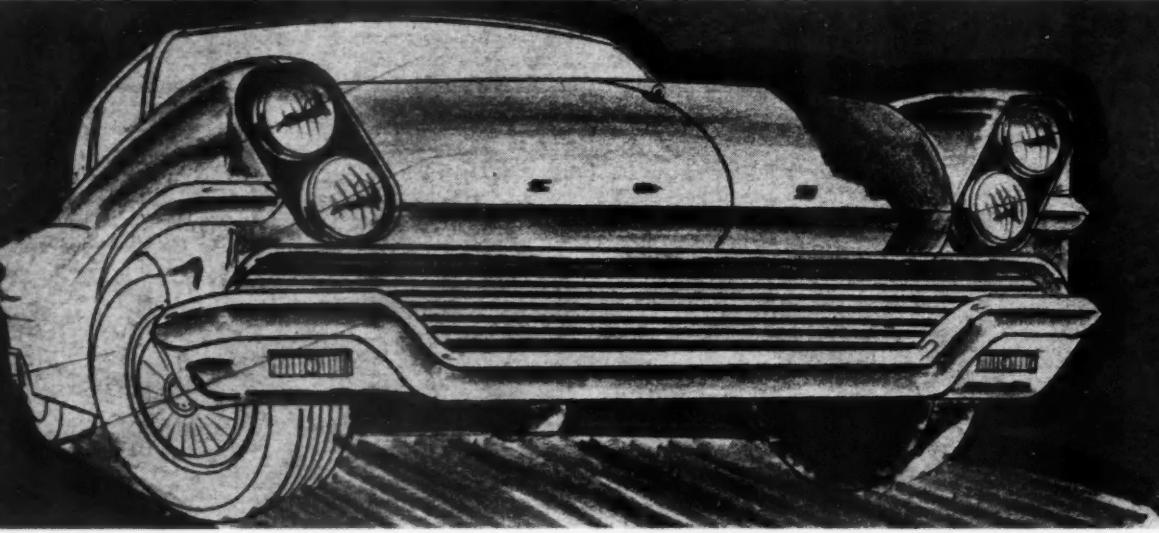
New car dealers, according to an Automotive News survey, have asked the factory to correct "high prices, sloppy construction, design, and gasoline thirst." Here, in word and picture, is what they can expect next month when the parade of new cars starts.

be standard, the grille and rear deck of each will be very distinctive, and they will offer a new station wagon. Four doors will predominate as will pillarless hardtop styling.

At this writing, it appears doubtful whether AMC will offer other than four doors in all wagons and the Rambler line; Hudson and Nash are each expected to introduce two-door sedans, however. Expect to see even greater use of color anodized aluminum across AMC's board.

Inside, the Plymouth will have the appearance of luxury, especially in the Belvedere and Fury models. The latter may be downright futuristic as regards passenger accommodations. Rumor has it that the front seats may be separate and capable of swinging to assist rear seat access.

DODGE grilles will be modified, and we expect this to imply slightly less accent on heavy chrome. The hood, too, could be



CHRYSLER CORP.

The new popularity of this firm's five makes has convinced both Styling and Engineering departments that they are on the right track. This factor, plus the all-new body and undersides for '57, presages little more than facelifting for the big '58 battle. From Plymouth on the low-priced end to the Imperial on the gilt-edged topside, there were, and still will be, more basic engineering and styling similarity than in the comparable lineup of any other manufacturer.

PLYMOUTH will continue to emphasize fins and high style along with overall length as top selling points. Starting with the front, though, there will be some minor sheet metal modifications. These subtle changes will not obsolete the '57 cars but they will set those of '58 definitely apart on close scrutiny. You may expect to see further emphasis on horizontal lines, when viewing the front end, to increase the illusion of width, and some corresponding changes, though slight, across the rear deck and rear bumper area.

somewhat lower.

The engines in the new Dodge will have increased displacement, more compression, some new carburetors for greater efficiency, and will develop from 10 to 30 per cent more rated power than in '57.

From Plymouth to the Dodge will be only a slight jump. Station wagons from Dodge may go for even greater lengths but they'll still share their chassis with the Plymouth wagons. Tail fins on the new Dodge will get the major portion of styling change, those of '57 having had just a bit too much the appearance of an afterthought.

DE SOTO hit a new high in popularity and these cars will, even more than now, seek to cover the medium-priced range, bite into the lower regions, and seek a slice of the sales pie in the edge of the prestige bracket as well.

DeSoto styling will probably change even less than will that of its two smaller relatives. The tail fins will change little in form or size, but the rear deck could become slightly rounded.

CHRYSLER cars will grow a bit in length to keep up with the competition and there will be less accent on power increases in the Windsor and Saratoga. The New Yorker, though, may show up with a new engine with displacement upwards of 420 cubic inches. Electronic fuel injection will likely be an option, though probably some time after introduction. Stylewise the Chryslers will most likely have new grilles. There is a strong possibility there may be a station wagon in the 300 series.

THE IMPERIAL will be facelifted to a minor extent; this prestige car will embark upon a little-annual-change philosophy to give it a more favorable investment outlook via lower depreciation. Inside changes in the Imperial will consist, mainly, in detail changes. One item we hope will be changed is the turn signal switch. Some new dashboard gadgetry is to be expected, and rear seat passengers will, if what we hear is true, have more legroom.

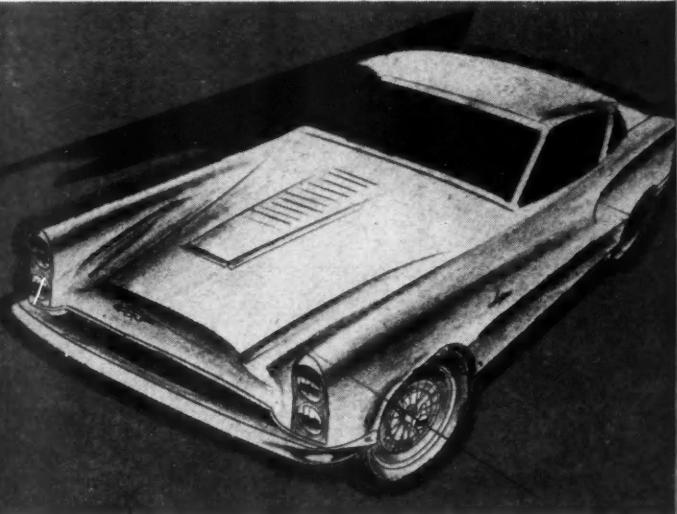
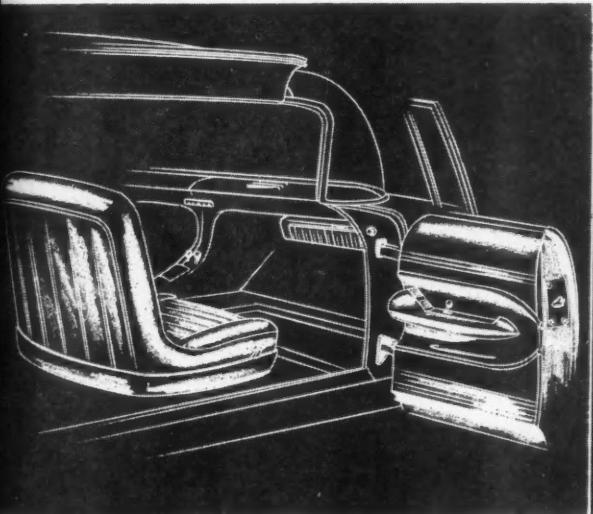
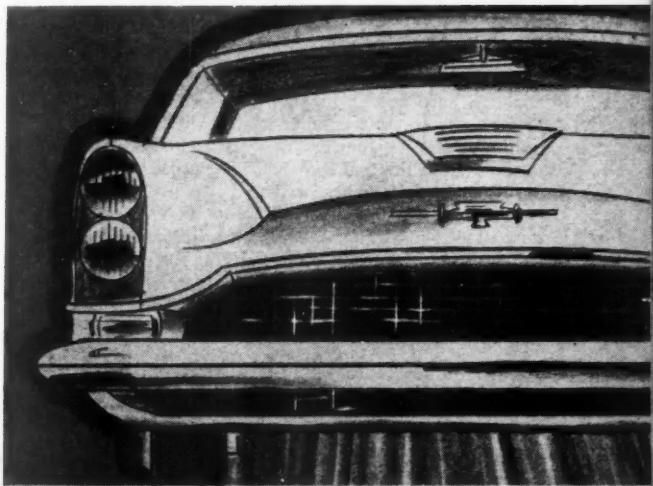
Imperial's fins will stay where they are and the rear deck will change none. The hoods over the headlights will get a new look and one model, at least, may get a new windshield with greater curve-over at the top.

All five Chrysler makes will feature dual headlights; at least one series in the Plymouth and Dodge will have the duals (re-1 ones) as standard equipment. All five will also retain their present transmission options but one will possibly show up with the buttons on the steering wheel. The Fury, Dodge D-500, and the Chrysler 300 (D) might feature aluminum wheels with

rear-end lighting will be brighter with two lights at the fin tips at least a possibility.

Power will be increased beneath the hood by means of displacement increases and improved carburetion. Fuel injection is unlikely, even as an option. Air suspension, though, will be an extra cost option. The "Six" will still be available.

Overall size of the Customline and Fairlane series will be



the brake drums integral for better cooling, but don't gamble on this. Of course they'll all retain the torsional front suspension—but, in the works there is a reported adaption of the new air springs to the rear suspension. Chrysler will almost certainly make the 20 per cent of the market target early in the '58 model year. We predict they'll retain it and possibly gain a bit more ground.

FORD MOTOR COMPANY

FORD, being encouraged by increased sales in '57 for the bread-and-butter line, will again offer two chassis. The two wheelbases will remain the same. The new and successful '57 body design will be altered only in detail but so extensive are these changes that Ford, from some angles at least, will look quite new.

The Ford grille will be deeper, remain wide and wrapped around, but will feature a mesh design rather than a heavy chrome bar styling. The grille outline will be more pronounced. Dual headlights will be optional on the Fairlane series and

little changed, if any. Inside there will be increased attention to the not-too-comfortable middle part of the rear seat, and the ride will be improved by better springing on the conventionally suspended models.

THUNDERBIRD will blossom forth with a four-seater version, will be a very hot performer, and will have considerably altered, though not radical, styling.

MERCURY for '58 will move upward by introducing a new model slated to invade the market occupied by the Buick Super and Roadmaster, and the big DeSoto models. This new Mercury will be styled like the Monterey and Montclair series but will be larger overall, will have a wheelbase of at least 124 inches, and will be called the Parklane. The other Mercury models, including the Turnpike Cruiser, will feature the current chassis but with noteworthy improvements.

Air suspension will be an option on most Mercury models, while the standard metal spring suspension system will have

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'58 Previews

continued

some developments that are rumored to make it ride as good as the best.

Only the Turnpike Cruiser, which will probably remain a separate entity, will have a curve at the top windshield but we will be surprised if its roof-top fresh air intake is not duplicated in some of the other models.

Styling of the '58 Mercury now seems to be little changed from the current line but some cleaning up has been done on the grille and rear bumper design.

Power increases are likely to put the Mercury in the vicinity of 350 rated horses and some transmission improvements are rumored to be quite striking. We expect to see Mercury keep the pushbuttons on the left side of the dash panel; also to be expected is an almost total lack of synchromesh and overdrive gearboxes.

EDSEL, an all-new Ford product, is accounting for a major portion of the \$350-400 millions that is being invested by the

Underneath will be found a fairly conventional chassis to which special attention has been directed to assure a model run of at least a couple of years with satisfactory lowness in overall height. The roof line will be distinctive, window area unusually generous, and hardtop styling will predominate. Unfortunately for growing families, the two-door station wagons are said to constitute a very small portion of scheduled Edsel production, with greatest attention being directed to four-door wagons in several series. As for the wagons, we expect that they may be a bit more compact than the Edsel sedans and convertibles as to overall length. Two-door models, however, will be numerous in the sedan lines.

Edsel will forego fins—they will be non-existent—of this we are certain. Chief styling effort has been made to give the car a very distinctive look without ostentation.

Edsel engines will, of course, be all-new, will be in two displacement sizes with the larger being close to 400 cubic inches. Rated power will be over 330 and possibly very close to the highest ones in the lower-medium priced field.

Frankly we predict the Edsel will make a good account, give real value.

LINCOLN will be the second of Ford Motor Company's all-new cars. For '58, prestige car buyers will find a longer, lower, sleeker

Ford Motor Company in its '58 line.

What can we say about the Edsel that has not been hashed over countless times throughout the automotive and general press to date? Very little more, although it's now fairly clear that the Edsel will probably be in competition with the Pontiac, Oldsmobile, Plymouth Belvedere, the Dodge, and the DeSoto Firesweep. It will also, unless we miss our guess, turn out to be something of a "conquest" car in its own backyard—it will offer some sales competition to the entire Ford and Mercury lines as well.

Four series of Edsels on two distinct chassis will place it, size-wise, close to the larger Fords, on the bottom end, and in close proximity to the Mercury Montclair and Monterey series on the top end. Extensive use of metal sculpturing will show up on the Edsel to make it completely distinctive without the necessity of employing chrome to gild the lily. The vertical grille will be refreshingly different as will rear end styling. Simplicity and the utmost in good taste will distinguish this new car. Even the headlights, duals of course, will cater to the likes of those who have been thinking that things were getting out of hand—in other words they will not be obtrusive.

The interiors of the Edsel will be among the industry's most comfortable and tastefully furnished, and the instrumentation is rumored to delight the heart of the automotive enthusiast. The transmissions available will cover the latest in pushbutton operated automatics, lever operated synchromesh, and overdrive.

and vastly more powerful Lincoln in showrooms.

The first Big Three car to embrace unitized or integral construction, the Lincoln will probably have a step-down interior, along with more seating space and legroom than ever before. It undoubtedly will take second place in comfort to nothing on the road.

The underside will, as in all integrally-built, chassis-less cars, have fewer protrusions. Ground clearance will be little affected; the driveshaft tunnel may cause a little foot obstruction to the middle passenger in the rear—but by this time Americans should have become accustomed to this by-product of lowness.

In size the new Lincoln will have a wheelbase several inches longer than its current 126 inches. It will be at least eight-inches longer overall, and maybe an inch or two wider. Height will decrease without sacrifice to headroom, thanks to the unit body construction.

Under the Lincoln hood will be an engine that, while not completely new, is rumored to be nearly so. Power will almost certainly top 400 by the rating methods now employed. An improved automatic transmission is said to offer less slipping and no less fuel economy, despite increased car weight and engine size. Fuel injection could show up later in the '58 model year.

Air suspension will be high on Lincoln's new features and will, unless we are completely wrong, be standard equipment

is to run overall usually lately said action, as may be seen as serious this time the two cubic use to count, -new weaker

on the Capri series. Handling qualities, with improvements in front end geometry and in the power steering, should be enhanced and put Lincoln's roadability back where it was in the '52-'55 period.

CENTRAL, the top car in Ford's stable, will also be all-new. However, the new Mark III will not be considered a make in its own right any longer, but rather will occupy a position relative to the Lincoln as does the Eldorado Brougham to the regular Cadillac line. It will be longer than the Continental Mark II, and will be available in more than one body design. We expect to see a four-door hardtop with increased rear seating space, especially legroom.

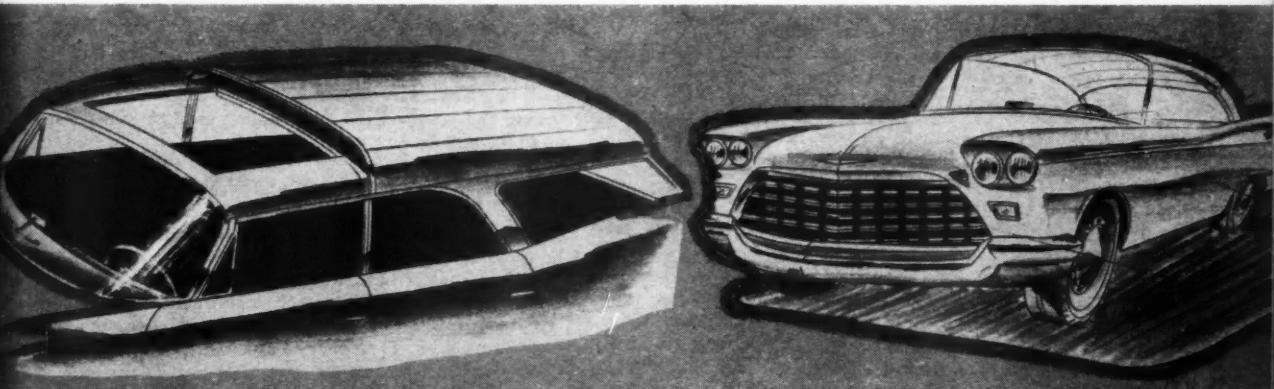
Taken together, the new Lincoln and Continental Mark III will share many styling features. Fins of altogether different design from those on the '57 Lincoln will be present. They will most likely be used to increase the car's length but will not be overly high; they may or may not be canted outward. The passenger greenhouse will feature greater window area and will be considerably longer than on any current Lincoln models. The hood will be long, wide, and fairly flat, and although these will be very large cars, they will display a lean and eager look with a minimum of chrome. They could turn out to be the surprise prestige cars of the year!

10.5 to 1. Fuel injection will probably continue to be an option, may even be easier to come by. Reliance though, will be placed on the dependability of carburetors. These will be used singly and possibly in multiples of three, with four and two barrels respectively. Horsepower, while no longer a big talking point under the recent AMA agreement, will be up considerably over present ratings, with 300 being a logical assumption on the top end.

Air suspension is slated to be an option for Chevrolet in '58, but we are inclined to think this will be offered only on the bigger Chevrolet. Much attention is being given to the ride in conventionally sprung cars for '58. Chevy is no exception. The fact remains that a big package at a comparatively low price has worked magic elsewhere and Chevy will follow the trend.

A new Corvette will bow in at about the same time as the Chevrolet passenger line. We surmise that this new stormer will materialize with many of the features of the recent Corvette dream car and the experimental SS competition job. So increased length due to greater grille emphasis, possibly air scoops to the rear brakes, and fins of some sort should give the Corvette an even racier look.

PONTIAC, recipient of an important facelift only in '57, will be



GENERAL MOTORS

CHEVROLET. Moving heaven and earth to get Chevrolet back on the pedestal of sales supremacy, GMC is reportedly spending close to a quarter million to accomplish this aim. By all accounts, and because GMC has a subtle way of pulling surprises out of the corporate hat, the '58 Chevy should be a knockout.

Hot after Ford, Chevrolet will likely bring out a larger-than-standard series with a chassis featuring a longer wheelbase. If we were to guess the dimension of the new chassis, we'd say that Chevy will mount a low-medium priced job with a new series name on a 119-inch wheelbase chassis.

Most likely is that Chevrolet will embrace the gently rounded and very practical lines of the "Impala" dream car of a couple seasons back. The Chevy will have fins, but they are not likely to be radically tall nor long. Body metal sculptured lines will probably separate the fins from the established line of the rear fender to a degree and a concave side motif, markedly similar to that used on the current Corvette, is a good bet.

The windshield of the new Chevrolet at least in one series, may wrap over slightly at the top. The rear window, of unusually large size, will follow roughly the same line. The roof will be quite thin and windshield pillars as well as door pillars (where they exist) will be exceedingly narrow.

Chevrolet will have a new batch of engines ranging from the Six to big V8 plants with compression ratios of at least

all-new for '58. Pontiac will share a new basic body shell with Chevrolet, as the practice has been for years, but the Chief's styling will be distinctive and very unique. The family strain will be evident and modern conservatism will prevail.

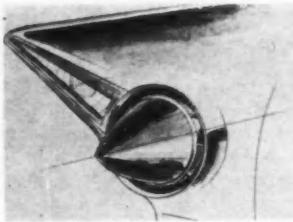
The two size wheelbases will continue a Pontiac feature, but each may grow an inch or so. Low overall height may cause slightly less headroom inside, but a new chassis, probably featuring an "X" type frame, will enable the interior designers to enjoy the benefits of stepdown construction.

Pontiac will also employ some body panel sculpturing to achieve individual styling, relegating chrome trim to an even more obscure position than in '57 when the traditional hood strips were purged. The rear window will wrap around to the front farther than currently. The windshield, on one higher priced series, may be wrapped over slightly at the top.

The hood and rear deck could conceivably employ sculptured effects to distinguish the car further from its flat-hooded GMC relatives. Dual headlights will be employed and an entirely new grille is indicated.

Power and performance, new for Pontiac in '57, will be increased still more. The engine, an improved version of the current very successful unit, will have the bore increased to a bit over four inches for a considerable jump in displacement. The compression ratio will probably go to 11 to 1 and horsepower ratings will final out well over 300 bhp. Torque,

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...Our '58 Preview continued....

for displacement offered, will be close to the industry's highest.

A new suspension system will incorporate new front members and quite possibly ball joints, while new rear suspension will reduce rear-end sway and make Pontiac one of the year's best handling cars. Air suspension will be optional across the board on all series as will a twin-traction non-slip rear axle. Higher rear axle ratios than formerly will help to keep fuel consumption from getting completely out of hand. Pontiac will probably be billed as one of the more economical medium-priced cars to operate.

Pontiac's much rumored sports car (see Aug. '57 MT) will probably pop around the first of the calendar year. Little is known for certain about this upper-priced bracket car's features, except that it will look like a Pontiac, go like blazes, and be offered in two distinct models: a two-seater and a four-seater with convertibles and hardtops in each series. When this car does appear, it could be one of the most talked-about cars existing. Unless something occurs to cloud the picture, it will give several well-known European types a whale of a go for the money.

OLDSMOBILE AND BUICK are both due for major off-year changes. While neither will be all new, neither will their new features constitute a facelift in the usual sense. Taking them both together, since their styling has not, in '57, been distinguished by any great success, these two makes will share a basic body shell that will appear comparatively new due to somewhat drastic alterations of the dies.

To begin with, the new Olds and Buick models, in all series, will retain the new chassis they each got for '57 but with important changes in each to accommodate air suspension. Buick will introduce a new brake, in all probability, that will feature aluminum alloy drums with cooling fins.

Styling, as briefly mentioned previously, will feature thinner roof sections on each car, larger rear windows without the small rear pillars. According to several spokesmen, nearly as many favorable letters and comments were received on the '57 rear window design as negative. Both cars will have dual lights and changed grilles.

Oldsmobile's distinctive and conservative approach to tail fins is expected to be retained while Buick will probably restyle their fins and employ new tail light shapes. Passenger greenhouses will be longer in both Oldsmobile and Buick. One top series may feature a compound curved windshield, though which one this might be is not known without sufficient surety to make this an outright prediction.

Buick will show power increases, a new Dynaflow said to be exceptionally smooth and free of slippage, a new heating system, and important improvements in air-conditioning.

Oldsmobile is also said to have greatly improved performance, a larger displacement engine, and to be retaining its triple two-barrel carburetor setup. Neither Buick nor Oldsmobile is likely to bring out a fuel injection option, at least not until later in the model year, if at all.

CADILLAC, of all GMC cars, will show the least change. Air suspension, though, as introduced on the Eldorado Brougham, will be available on all Cadillac series. Likewise, dual headlights will be standard and a slightly changed grille will give the frontal appearance a considerable change. The hoods of all series will be lower and flatter, much as that of the Brougham, and the rear decks of the 62 and 60-Special series will have a bit more dash somewhat akin to that of

the recent convertible and hardtop Eldorados.

Tail fins, something Cadillac started, were recently rumored to be on their way out. This, however, is untrue. The Cads for '58 will be little changed, the present effect having been judged as being both sufficient and distinctive without being overly pompous.

STUDEBAKER-PACKARD CORP.

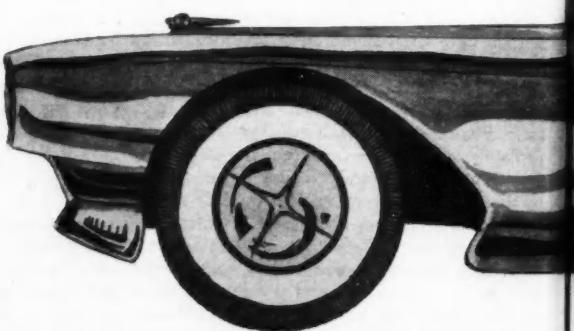
This firm, fighting for its life in a seemingly endless swamp of big competitors, will seek still further to present the individualistic buyer with a selection of different cars. The Scotsman, amazingly successful in that all zones sold their original quotas extremely quickly, will be continued with slight, though significant changes.

CHAMPION will get new trim, a bit more power, retain the six cylinders, but have a plusher look both outside and in.

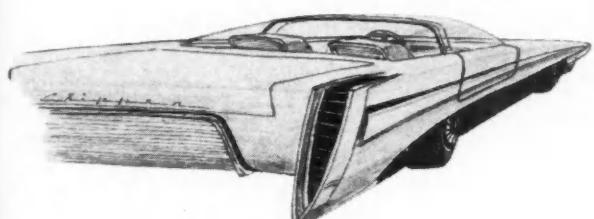
THE COMMANDER V8 will get increased power, quite likely at least one new body model, will have dual headlights as an option, and get hood and deck contour changes to make it look up-to-the-minute.

PRESIDENT models will get a push by Studebaker with a considerable facelift. There should be as much change here for '58 as there was in the '56 line. In other words, the bodies will be same but front and rear quarter panels will be the result of widely altered dies. Fins will assume greater importance on Studebakers and the two wheelbases will be retained with accent on the 120.5-inch chassis which, if we're not mistaken, might grow a bit. There may be a new hardtop sedan. All series will use 14-inch wheels.

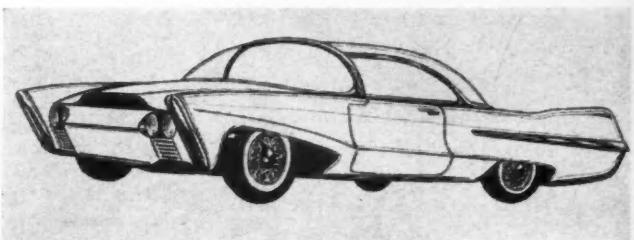
PACKARD for '58 will get greater attention, due to more styling and tooling time, than in '57. New hoods will bring back the traditional Packard look and the car will be larger, more luxurious, and considerably more powerful. The new cooperation with Daimler-Benz may result in a new fuel injection installation, and important suspension changes are in the works. Dual headlights will appear, and unless we're completely wrong, '58 will see some surprises from S-P engineering-wise too.



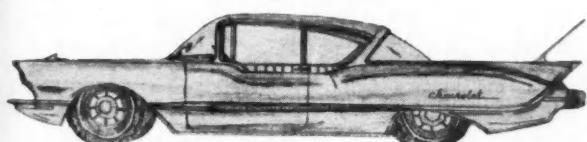
...and what our readers think the '58 cars will look like.



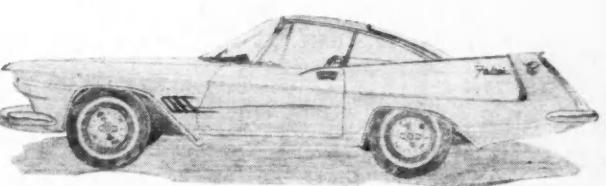
SPORTS CARS seem to have captured our readers' fancy. Here is James A. Ferrara's version of Packard Hawk.



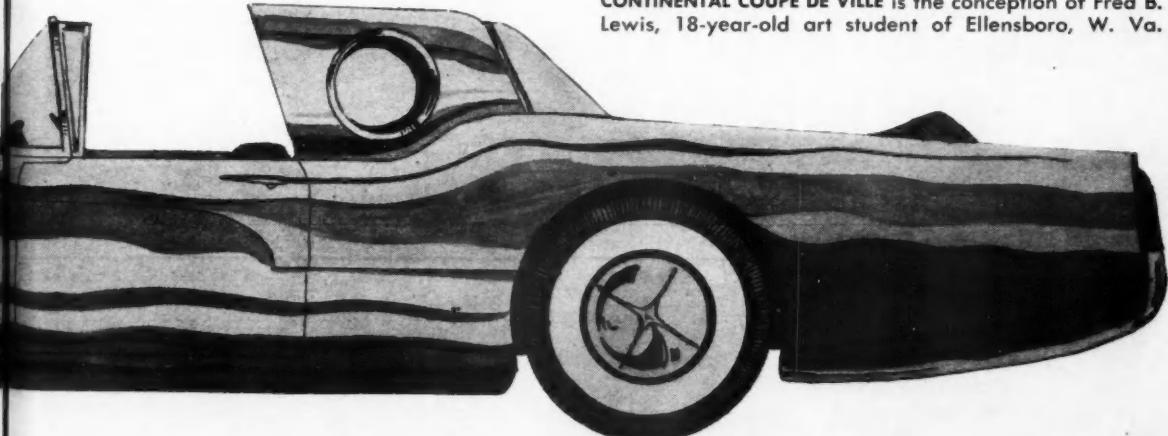
A CAR OF THE NEAR FUTURE, envisioned by Thomas A. Murphy, is a combination of general Big Three styling.



IS THIS THE '58 CHEVY? Howard Itzkowitz combines ideas derived from '57 model, dream cars, artists' drawings.



CHRYSLER'S ENTRY in the sports car field will be this powerful "Falcon," predicts designer Howard Itzkowitz.



CONTINENTAL COUPE DE VILLE is the conception of Fred B. Lewis, 18-year-old art student of Ellensboro, W. Va.



LeMunyon, Tasha Lama and T

TASHA LAMA, the Living Buddha of Mongolia, munched on a dried fishhead, and the little American, sitting at the honored position to the right, couldn't make up his mind which stank worse—the fishhead, or the human idol himself.

It didn't matter much to the American, E. C. LeMunyon, because he was eating lunch with the never-bathed lama as a matter of courtesy and diplomatic trust. The 2500 taels of silver now in LeMunyon's possession sort of immunized him against the vile odors which coiled invisibly into his nostrils.

LeMunyon knew that he had achieved what no other man in American automotive history had done. He had driven a Model T Ford across the Gobi Desert, delivering it to Tasha Lama in two weeks, and the lama had paid him off.

'The Tasha Lama will pay you 2500 taels of silver if you deliver a Model T'

Inwardly it was a great reward for LeMunyon, a man among men, to pilot the car from Tientsin, China to Urga, Mongolia. But it was not accomplished without ordeals that made him wonder whether it was ever worth it.

I never knew Tasha Lama, but I know LeMunyon, and value his opinions. The Tasha Lama was 40 years old when he heard about and hankered for one of the new-fangled American machines called the automobile.

His desire was in practical reality an order. Being a holy man, Tasha Lama, the deity of all Mongolians, made a wish a command. He wished for the American car, and that was that. His Mongolian flock, inestimable millions, saw to it that he got one.

LeMunyon, then in business in Tientsin, was the man they contacted. The deal was that if he would deliver the Model T to the lama, he would be paid 2500 taels of silver. In the liang of China, the *baikwan* tael was worth 72.4 cents. LeMunyon stood to show some profit, but the overhead, in the way of physical barriers, almost forced him to abandon the project during the long, 700-mile run across the Gobi to the lama's headquarters.

It was early in September, 1912, when the automobile, a standard four-cylinder vehicle with planetary type transmission and foot control, arrived at Tientsin from Detroit. Before he embarked with the precious car, LeMunyon, who had to be shrewd to deal with the Chinese, initiated a little investigation of his own. He came up with some startling information from which he conjectured that the lama's wish for a car was prompted by two situations—impending blindness and his lanky Mongolian girlfriend, each inordinately persuading.

LeMunyon sent 10 gallons of gasoline by camel caravan ahead to Pangkiang, a stopover and telegraph station deep in the Gobi Desert. Urga, forbidden to foreign travel, was LeMunyon's destination. He had the lama's permission to enter the city, second only to the forbidden city of Lhasa, Tibet, where the Dalai Lama lived.

Two weeks after he shipped out the gasoline, LeMunyon hired enough coolies to lift the Model T, loaded with cans of extra gasoline and water, onto a flat car to haul it to the end of the Peking-Kalgan Railway, running from Tientsin to Kalgan, the nearest point to the Gobi Desert. The trip took three days.

MONGOLIAN BANDITS help LeMunyon pull the T through a muddy river bank.



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by Dewey Linze

To MONGOLIA

MANCURIA



, when cylinder mission from the north to be initiated. He came from the U.S. wish situations lanky dlinately

gasoline Jiang, a in the foreign on. He after the city of a lived. But the coolies cans of flat car Kalgan Kalgan, vert. The

bank.

On the afternoon of September 22 the train chugged into Kalgan. The coolies at the station unloaded the car, and its presence in the town lured spectators like flies to a honey pot. LeMunyon, in self-defense, had to leave immediately.

The first six miles put the Model T through a road test that proved the car was engineered for endurance. Although there was some mechanical moaning, the car was driven the entire distance in low gear.

That night it began to rain, and in the distance, LeMunyon saw the twinkling lights of a Chinese inn, actually a stable with a leaking roof. Fearful of colliding with a boulder or dropping into a gulch in the blinding downpour, he parked the Model T and stayed at the inn all night.

The next morning, in a survey of land ahead, he saw that he hadn't misjudged the terrain. A gaping riverbed began where the trail he had taken ended. Even at the slow rate of speed he had been traveling, it would have been suicide to the car—and to himself—had he kept going.

LeMunyon was wise in that the more he conserved the strength of the Model T the better the chance that he would de-

liver it to the Tasha Lama. He hired coolies with five bullocks to draw the car miles up the riverbed in a shortcut to the flats of the Gobi.

He soon saw that to reach the desert's levels he had to do some climbing. The bullocks towed the car up to the Temple of the Horse near the top of the vast, arid plateau, and there the whole shebang stopped to rest.

Now LeMunyon felt that he was getting somewhere. He could see the watchtowers of the Great Wall, standing in stark isolation 20 miles from the main wall, as they had for centuries. After the respite, they moved out on the Gobi's spreading, barren, waterless, alkaline plains.

LeMunyon ordered the bullocks un-

hitched, and he climbed in behind the steering wheel of the Model T. The car was almost rim-down with her gasoline and water load, and LeMunyon checked its copper-brad tires to see whether they would stand the stress. A few of the copper buttons had popped off, but all in all the tires were holding their own, and more. LeMunyon was satisfied.

After a few miles the car ran hot and died, and LeMunyon stopped to give it another examination. It was just a little dry, and he fed it some water. Peculiarly the Model T went dead near two graves which were opened at the heads so that the spirits could travel to and fro freely.

The Gobi Desert was the roughest terrain that LeMunyon had ever seen. It was a desert of rocks, none with round edges. They chopped at the tires like axes, and it took some skillful driving on LeMunyon's part to avoid punctures.

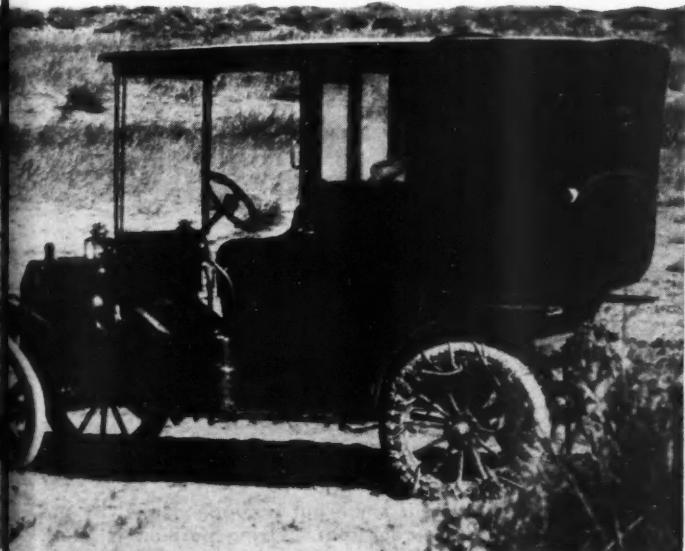
When 30 of the 700 miles lay behind him, LeMunyon came to a river, where he replenished his water supply. He tested the depth of the river and found it too deep to try to ford with only the 20 horses in the car's motor.

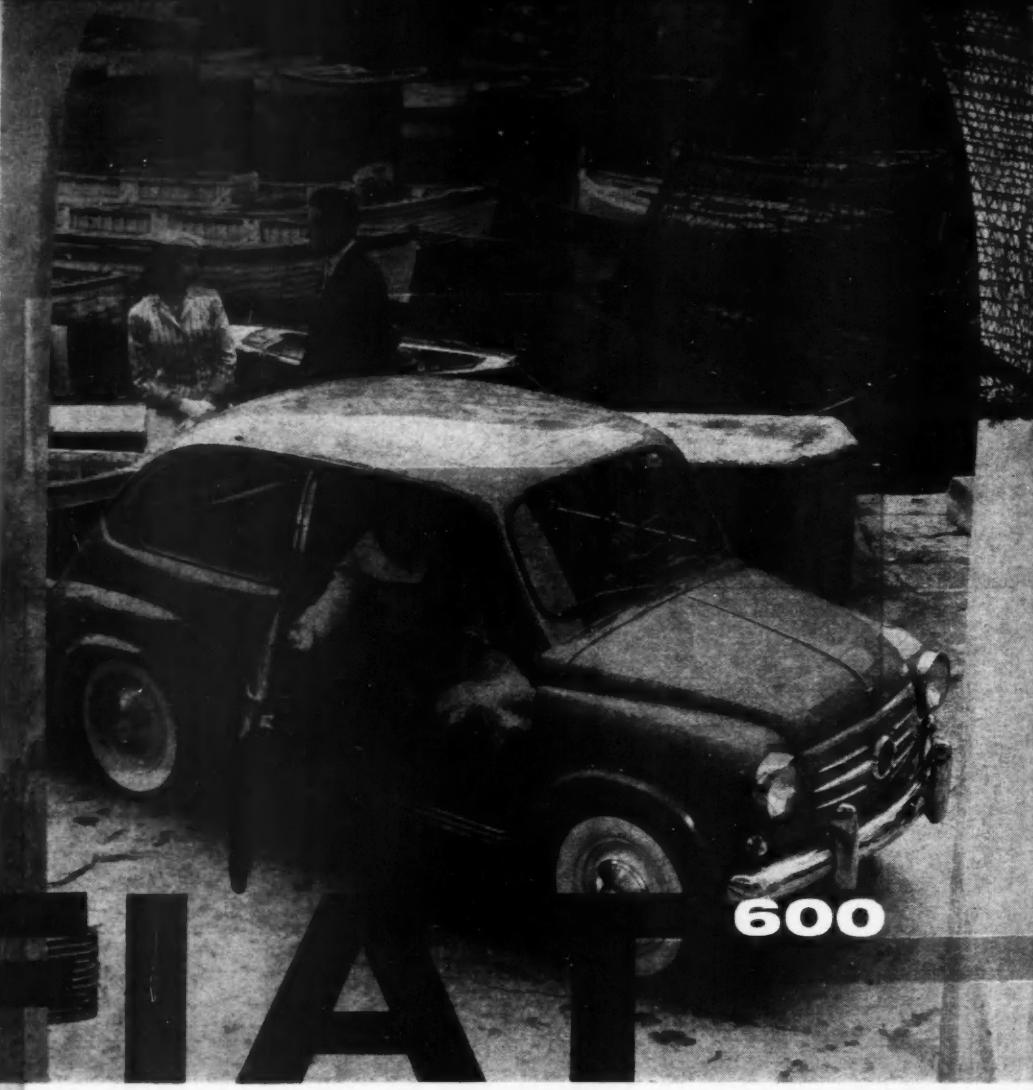
Fortunately, he acquired help from a passing Mongolian-pony caravan. He didn't know whether to trust the motley phalanx, but he didn't have much of an alternative. In his best Mongolian he asked for a little extra horsepower.

Rigging up a block and tackle for leverage, they pulled the Model T across the river. The water came up to the carburetor. Before starting through the river, LeMunyon fired up the engine, and the noise almost caused the wild, shaggy ponies to bolt. He quickly switched off the ignition, but not before a couple of the Gobi cowboys were tossed.

The river was crossed, and on the other side the Mongolians lined up to get a

continued on page 68

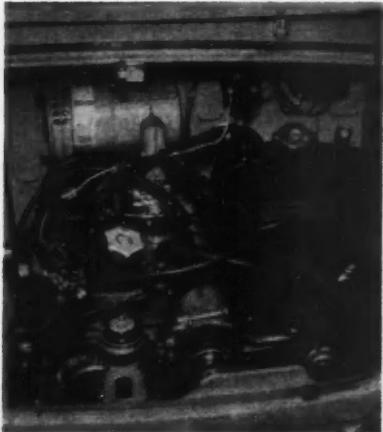




FIA 600

drivescription

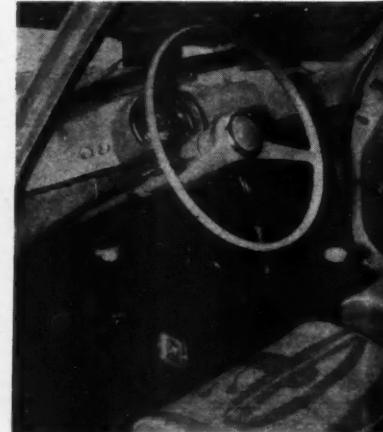
by Robert C. Scollay



SERVICING THE ENGINE in this car is a cinch. Note the ease with which a fan belt may be changed. Space for lug-



gage up forward is small but is supplemented by the space behind the rear seat. Driving position is good.



sedan



SOME OF THE NEWEST contenders for a slice of the rapidly growing market for small cars in this country have been tossed in the ring by the Fiat organization of Italy. This manufacturer is no neophyte in the car building business, and a brief inspection and short ride in one of these unique little vehicles should convince the most skeptical that this is a serious and well-founded effort to get on the bandwagon.

Our first inspection of the 600 Standard two-door sedan made us immediately aware of the high level of workmanship which is incorporated into this car. The doors close with a satisfying clunk, body panels fit, and there are no rag-tag ends on either the exterior or interior such as loose seals and trim. The entire keynote seems to follow a functional simplicity which avoids austerity because of the excellent finish.

Opening the rear engine compartment should provoke loud cheers from mechanics, service station attendants and do-it-yourselfers. The usual under-hood clutter is pleasantly absent. The radiator is conveniently offset to one side and service points are probably more accessible than in any other car. The engine is an ohv four displacing 38.6 cubic inches which develops 22 bhp at 4600 rpm. The transmission and differential are mounted as a unit with the engine, and the final drive is direct to the swing rear axles and independently sprung wheels.

One of two big surprises we got from the 600 was the ride. It might be expected that a car with a wheelbase of less than 79 inches and with 12-inch wheels would offer something less than ideal. If we cannot describe this ride as ideal, we can honestly say it is great. It is firm enough to avoid sloppy wallowing and yet it smooths out really rough roads. Sharp and deep chuck holes that you might expect would bounce you against the roof are disposed of with a gentle little thump. There is practically no dive during hard braking and the body stays level in the sharpest corners.

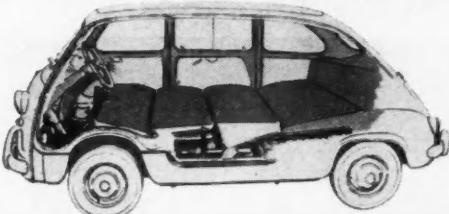
A second surprise comes in the handling. The car is admittedly no bomb and it is doubtful that you would attempt power slides and other such driving capers in it. Cornering at full throttle leaves you with a sense of control and security. In tight corners it is possible to set up a gentle but controllable drift. If you break the rear wheels loose in a gravel road turn, corrective action on the wheel is positive and responsive.

To sum it up, this is a fine little car that puts many of its bigger brothers to shame in many departments including the 39 mpg we averaged under definitely uneconomical driving conditions.

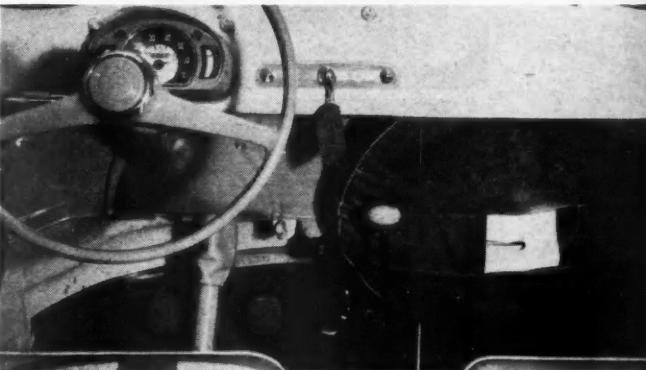
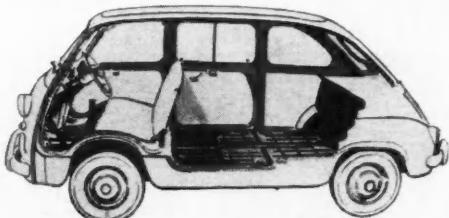
multipla

ONE OF THE CRITICISMS leveled at very small cars has been that they lack interior space for the comfortable seating of passengers and the stowage of luggage or other impedimenta. Fiat solved this space problem and went several steps further in the forthright and functional design of the 600 Multipla. As its name connotes, this is an all-service vehicle which seats four to six adults, and can fulfill most of the requirements placed on a station wagon or camper-type vehicle.

With minor modifications, the Multipla chassis is similar to that in the 600 sedan. Despite the different weight distribution resulting from the seating arrangement, we were unable to detect any departure from the superb riding and handling qualities which enthused us in the sedan. Most of our mileage was covered with just the driver aboard and we averaged 40 mpg on all types of roads ranging from sea level to an altitude of 1875 feet. We vote for this one as a happy and useful little chunk of machinery.



THE MULTIPLA is available as a six-passenger station wagon or a four- to five-seater, sleeper-type vehicle.



FRONT SEAT passenger space looks crowded but there is ample toe room under inside mounted spare and tools.



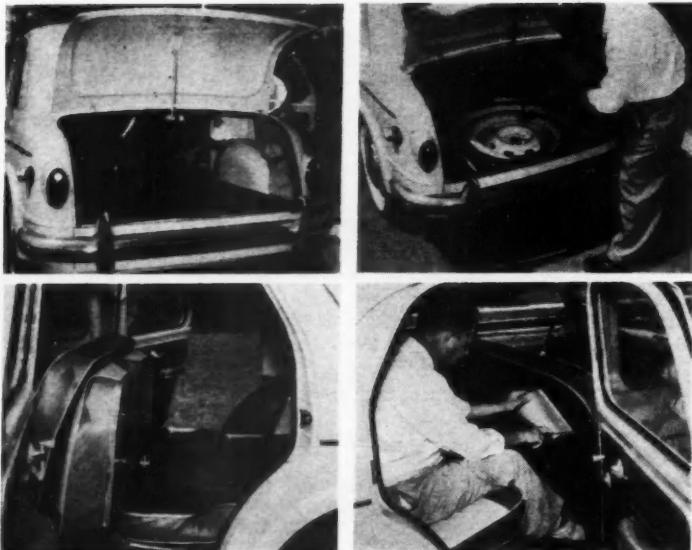
DRIVER'S SEAT is directly over front wheel in Multipla, with high position affording excellent all-around vision.

FIAT 1100

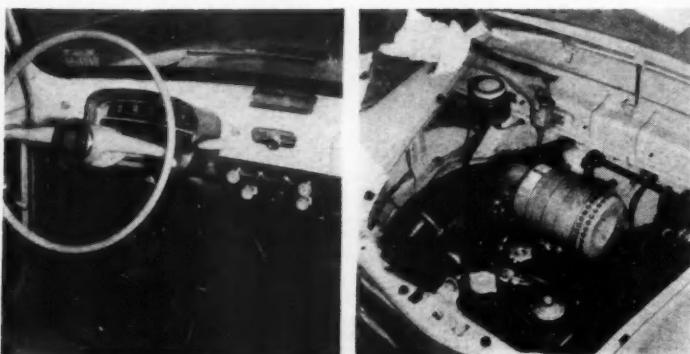


FIAT 1100 has front and rear doors mounted on a common hinge in the narrow center post. Wide door openings facilitate entry and exit.

PHOTOS BY BOB D'OLIVO



EXCELLENT space utilization is evident throughout. Rear seat and trunk space are interchangeable when the rear seatback is folded downward.



INSTRUMENT CLUSTER is compact and easily read. Controls are convenient to driver. Engine compartment layout facilitates servicing.

MORE CONVENTIONAL in many respects and somewhat larger than its diminutive brothers is the Fiat 1100. Our overall impression of the car's appearance was that it is a well proportioned, scaled-down version of a full sized car which, by clever space utilization, remains a most practical little vehicle. The same excellent workmanship and finish which characterizes the 600 series is evident throughout.

The front mounted 40-bhp engine gives the car more "go" and we could assail quite formidable grades without the frequent down-shifts which were required in the smaller cars. Handling qualities are even better than in the 600 series and the additional power pays off when you come out of a tight corner. Responsive steering and the lack of body roll give you a sense of complete command over the car at all times.

The car is comfortable to ride in over all types of road surface including washboard gravel. Coming out of a sharp dip there is practically no pitching, and it clings to the road like a Chrysler.

One of the unique features of the 1100 is the method by which the trunk space may be extended into the rear seat. The rear seat cushion folds forward and the back cushion downward to form a flat floor from the rear of the trunk to the back of the front seat.

We liked this one too, and we also liked to see that without sparing the horses in any way it gave us 28.1 mpg. —R.C.S.

FIAT SPECIFICATIONS

Fiat 600 Standard and Convertible

ENGINE: 4-cyl. in-line ohv, rear mounted. Bore 2.36 in. Stroke 2.20 in. Stroke/bore ratio .93:1. Displacement 38.6 cu. in. Advertised bhp 22 @ 4600 rpm. Bhp per cu. in. .57. Piston speed @ max. bhp 1690 ft. per min. **TRANSMISSION:** 4 forward speeds, 3 synchronized. Rear axle ratio 5.38:1.

CHASSIS: Unit chassis/body construction. Front suspension—-independent wheels with transverse leaf spring and hydraulic telescopic shocks. Rear suspension— independent wheels with wishbones, coil springs and telescopic shocks. 5.20 x 12 tires. Hydraulic 4-wheel brakes. Worm and segment steering gear.

DIMENSIONS: Wheelbase 78.7 in., overall length 130.5 in., overall height 55.3 in., overall width 54.3 in., minimum clearance 6.3 in., front tread 45.3 in., rear tread 45.5 in. **PRICE** (F.O.B. port of entry): Sedan \$1298, Convertible \$1360.

600 Multipla

(Same as 600 Standard and Convertible except as noted) **TRANSMISSION:** Rear axle ratio 6.43:1.

CHASSIS: Front suspension—independent wheels with wishbones, coil springs, hydraulic telescopic shocks and anti-roll bar. Worm and roller steering gear.

DIMENSIONS: Overall length 140.8 in., overall height 62.3 in., overall width 57.0 in., minimum clearance 6.9 in., front tread 48.3 in., rear tread 45.5 in. **PRICE** (F.O.B. port of entry): \$1598.

1100 Standard

ENGINE: 4-cyl., in-line ohv, front mounted. Bore 2.68 in. Stroke 2.95 in. Stroke/bore ratio 1.10:1. Compression ratio 7.0:1. Displacement 66.43 cu. in. Advertised bhp 40 @ 4400 rpm. Bhp per cu. in. .60. Piston speed @ max. bhp 2165 ft. per min.

TRANSMISSION: 4 forward speeds, 3 synchronized. Rear axle ratio 4.30:1.

CHASSIS: Unit chassis/body construction. Front suspension— independent wheels with swinging arms, coil springs, hydraulic telescopic shocks and stabilizer bar. Rear suspension—leaf springs, hydraulic telescopic shocks and stabilizer bar. 5.20 x 14 tires. Hydraulic 4-wheel brakes. Worm and roller steering gear.

DIMENSIONS: Wheelbase 92.1 in., overall length 150.0 in., overall height 58.6 in., overall width 57.3 in., minimum clearance 6.1 in., front tread 48.4 in., rear tread 47.8 in. **PRICE** (F.O.B. port of entry): \$1655.

FIAT 500



ALL FOUR WHEELS are independently suspended. Power plant, drive line and rear suspension form integrated unit.



CUTAWAY VIEW shows interior of the 500.

By putting the Fiat 500 into production at their vast, newly extended Mirafiori works outside Turin, Fiat becomes the first major manufacturer to produce one of the new miniature economy cars, though the tradition of well-engineered miniature cars in Italy goes back to the Fiat 500 of 1936. One in every two cars sold in Italy is already a Fiat 600, so something new was required to bring motoring within reach of some of the two million motor scooter owners and six million cyclists. Fiat's answer is a real small car, in appearance a scaled-down 600. It is well engineered and robust, with high standards of handling and riding comfort, along with built-in safety factors.

I tried out the Fiat 500 on the fast, flat road of the Val di Susa, which leads from Turin towards the forbidding Mon Cenis Pass, and then turned up the steep, tortuous mountain track leading to the dizzy crag of San Michele. In all this driving, one impression stands out above all others: the astonishing smoothness of the aircooled vertical twin engine. This is accomplished with a flexible coil spring to control vertical motion (though the engine is free to move up and down through a large amplitude) and a broad link straddling the spring to prevent fore and aft movement under acceleration or braking. The latter pivots on rubber bushings, which absorb the torsional vibrations. Front mounting is by rubber blocks.

Whether idling, pulling hard in top gear, or overrunning on a closed throttle, it is practically impossible to sense that it is not a four-cylinder engine. When cruising at 50 mph, which it does happily, or when pulling hard in gears, there is an audible but not obtrusive whine from the cooling fan.

Omission of synchromesh from the gearbox is a cost-cutting measure that is not noticed on upward changes. It is easy to shift down without double clutching, though it takes practice. There is no great fuss from the engine as it reaches maximum revs; it gives the impression it would stand hard driving indefinitely. The design obviously provides for it, as the cooling fan drives air not only over cylinders and heads, but through the cooling passages in the oil sump.

HANDLING seems to be at least as good as the Fiat 600. It corners fast without a trace of roll, and without the tail-heavy sensation often experienced on rear-engined cars. I found no tendency for the tail to break into a slide, though I was flinging it into tight corners. Steering is accurate and free from road shocks.

The seats, with fabric pads on rubber bands, are well-shaped and comfortable. Legroom is liberal (28 inches from seat to floorboard), headroom is ample (37 inches). Vision over the hood is excellent. The corners of the car are not visible but are so near one allows for them instinctively. The pillars are not thin, but are placed so as not to obstruct vision. Steering wheel, pedals, and the sensible pull-up brake are as well placed as on a first-class sports car.

Side windows are fixed, but doors have pivoted vent panes, which with the two fresh air intakes at the front, keep the temperature down. All cars have a folding top. Despite debatable points like the forward opening doors and the mounting of the battery alongside the fuel tank at the extreme front, this little car should succeed. It is nicely finished and comfortable. Riding comfort is equal to that of much bigger cars. It is not just a runabout for city streets, but a serious car with springing, brakes and performance to permit long journeys in comfort.

—Gordon Wilkins

PERFORMANCE

Max. speed in gears, 1st 16 mph, 2nd 25 mph, 3rd 38 mph, top over 53 mph. Acceleration: from standing start to 30 mph 10 secs., to 40 mph 18-19 secs. Fuel consumption average (factory claim) 52.3 mpg.

SPECIFICATIONS

ENGINE: Vertical twin, four-stroke, ohv, aircooled. Bore 2.6 in. Stroke 2.7 in. Stroke/bore ratio 1.04:1. Displacement 29.2 cu. in. Advertised bhp 13 @ 4000 rpm. Bhp per cu. in. 0.445. Max. torque 20.2 lbs.-ft. @ 2500 rpm.

TRANSMISSION: Four forward speeds, constant mesh. Ratios: 3.27, 2.07, 1.30, 0.875. Rear axle ratio 5.125 to 1. Single-plate dry clutch.

CHASSIS: Integral body and frame. Suspension: independent front by wishbones and coil springs, independent rear by single wishbones and coil springs. Tube shocks. 4.88x12 tires. Hydraulic, self-adjusting brakes. Handbrake on rear wheels. Worm-and-sector steering gear, with 28:1 turning circle, 3.5 turns lock-to-lock.

DIMENSIONS: Wheelbase 72.4 in., overall length 116 in., overall height 52.2 in., overall width 52 in., front tread 44.1 in., rear tread 44.7 in., weight 1036 lbs.

THE DKW HAS COME A LONG WAY since that first postwar Technical Exposition in 1949 at Hanover, Germany, where a banner at their exhibition stall proudly proclaimed that "DKW IS HERE AGAIN." What the public did not realize is that the single motorcycle and delivery van on display by the once mighty organization was the firm's total output since the War's end. It had barely been completed in time for the show in their new factory, a makeshift ex-army barracks in Regensburg.

Output has increased manyfold since. The modern Auto Union works at Dusseldorf—no more army barracks—hums with day and night production. Approximately one-third is intended for the export market, where the various models ranging from the three sedans, a station wagon, delivery van, combis and light trucks have been well received in all parts of the world.

The most expensive of their sedan lineup is the four-door sedan. When equipped with optional Saxomat, an intriguing flyweight and vacuum controlled clutch which does away with the clutch pedal, it seems to represent what DKW offers the value-minded consumer. But an analysis of the several small imported sedans reveals that success is not wholly contingent upon the elements expected of a small sedan—economy, durability, ease of handling, etc.—although these are necessary. The manufacturer increases his chances with a gimmick which usually takes the form of unusual engine design or placement.

DKW has two sound gimmicks: front-wheel drive and

ROAD TEST

An MT Research Report by Wayne Thoms

"Three Equals Six," which is their shorthand way of stating the fact that the diminutive three-cylinder, two-cycle engine offers as many power strokes as a six-cylinder mill of conventional design.

What might be considered a primary inconvenience is the mixing of one part SAE 40 non-detergent oil to 40 parts of gasoline. It really is no problem if you remember to faithfully add one pint of oil to every five gallons of gas. Compensating for this, you can stop worrying about changing the oil filter, warming up the oil on cold mornings—every piston stroke lubricates—or ever grinding a valve again. Elimination of the camshaft and its drive train, valves, tappets and sundry other necessities peculiar to the four-cycle engine brings the moving parts of the DKW engine down to seven. Ball bearing crankshaft and con rods mean less wear and longer engine life. One particular point of engine interest is the distributor. It has three sets of breaker points and an equal number of coils, mounted within inches of each plug.

Engine accessibility is excellent and ease of repair is greatly

PERFORMANCE

Max. speed in gears, 1st 22 mph, 2nd 42.5 mph, 3rd, 63.5 mph, top 76.5 mph. Acceleration: from standing start to 45 mph 18.2 secs., to 60 20.9 secs., 1/4-mile 25.3 secs. and 54.5 mph, 30-50 mph 14.6 secs., 45-55 10.9 secs. Fuel consumption average for 496 miles 24.7 mpg. (27.0 mpg, free wheeling only, all city; 19.1 mpg, direct drive, city and mountains, hard driving).

SPECIFICATIONS

ENGINE: 3-cylinder, 2-cycle. Bore 2.80 in. Stroke 2.99 in. Stroke/bore ratio 1.07:1. Compression ratio 7:1. Displacement 54.75 cu. in. Advertised bhp 45 @ 4250 rpm. Bhp per cu. in. .82. Piston speed @ max bhp 2119.3 ft. per min. Max. bemp 151.5 psi. Max. torque 55 lbs.-ft. @ 2250 rpm.

TRANSMISSION: Dry single plate clutch (Saxomat magnetic clutch on test car). 4 forward speeds, top 3 synchronized. Overall ratios: 18:1, 10.48:1, 6.17:1, 4.32:1. Rear gear ratio 4.72:1.

CHASSIS: Fully enclosed box-type frame. Front suspension—transverse semi-elliptic leaf spring at top, 2 wishbones with tubular shocks below. Rear—transverse semi-elliptic leaf spring, 2 tubular shocks. 5.60 x 15 tires (tubeless standard). Hydraulic dual disc brakes. Rack and pinion steering gear, with 36.5-ft. turning circle, 2.5 turns lock-to-lock.

DIMENSIONS: Wheelbase 96.5 in., overall length 170.3 in., overall height 58.5 in., overall width 66.7 in., minimum clearance 7.5 in., front tread 50.7 in., rear tread 53.2 in., weight 2080 lbs. (56% front, 44% rear), weight/bhp ratio 46.2:1.

PRICES (port of entry): 2-door \$1995, Deluxe coupe \$2195, 4-door \$2365.

ACCESSORIES: Saxomat clutch \$100.



DKW

simplified. A case in point is that of a West Coast college student who drove his three-year-old station wagon deep into the back country of Mexico, traveling roads considered impassable. While fording a stream he submerged his tailpipe, thereby building up excessive pressure in the cylinders and blowing a head gasket. Hopelessly stranded? Not at all. A village garageman cut a new gasket from sheet asbestos and installed it. Four dollars later the young man was on his way again, this time avoiding the deeper water holes.

Free-wheeling, standard on all models, makes for greatly increased fuel economy in city driving. It can be used at all times except where mountains or slippery road conditions make engine braking a safety factor.

Saxomat, the nearest thing to automatic transmission that a low-horsepower automobile can offer, does away with the clutch for \$100. A prospective purchaser would do well to become familiar with the device in operation before making a decision. Simplified, the Saxomat works like this: touching the shift lever actuates an electro-magnet which operates a vacuum servo mechanism which, in turn, disengages the clutch. The clutch will not engage until the driver removes his hand from the shift lever. It can be disconcerting to an unthinking driver to shift, say, from fourth to third in traffic, forget to remove his hand, and sit with a disengaged clutch.

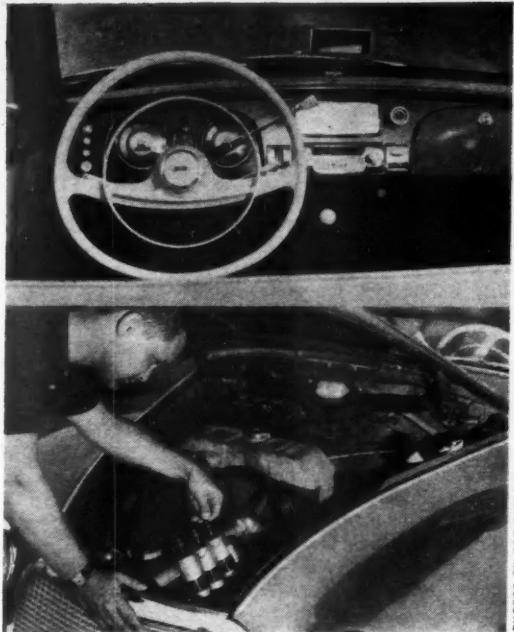
Fast shifts are out of the question with Saxomat, which explains the relatively slow (compared to large, high-powered American cars) acceleration times we recorded on the San Fernando Drag Strip. While it is possible to move the gear lever rapidly, the clutch engages at a pre-determined low rpm and no amount of speed shifting will help. However, for anyone who spends a great deal of time in stop-and-go traffic, saving of wear-and-tear on the clutch foot will probably be worth the money.

Driving the DKW can be termed a real pleasure. Switch on the ignition, which also incorporates a steering wheel lock, pull out the choke and the car fires immediately. A pull knob below the dash controls a sliding screen behind the grille, aiding in cold-weather operation. Normally you may ease the choke in until the engine is running smoothly and then take



UNUSUALLY SPACIOUS trunk compartment for a small sedan features bolt heads in deck lid protected with rubber covers. Unique off-center oval wheel sets off neat dash which displays American influence in trim and layout. Two-stroke, three-cylinder engine boasts three coils, radiator at rear, only seven moving parts, ease of maintenance.

◀ **LEG ROOM** is adequate for all but tallest while rear-opening door makes for ease of entry. Absence of clutch pedal is rare on light car. Factory is planning larger brake pedal on future models.



PHOTOS BY BOB D'OLIVO

4-DOOR SEDAN

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All but the most severe bumps are taken with a minimum of rebound at all speeds. Fast turns are a cinch if power is kept on. The car has no tendency to wallow coming out of dips and will track without correcting. Rack and pinion steering, at two and one-half turns lock-to-lock, is light and sensitive. Straight line recovery is excellent after whipping the wheel from side to side. The steering wheel itself is worthy of note. Two-spoked, the bottom half assumes an oval shape. Overall it is a convenient 15½ inches wide and 15 inches high with the center hub placed seven inches from the bottom. Unlike some small sedans which tend to become airborne, the DKW feels safe and secure when going as fast as its 45 horses will pull you.

Brakes are certainly better than average. A trip through the twisting, mountainous Angeles National Forest proved that brake fade could be induced but only after deliberate abuse far more severe than anything which would be encountered in normal driving. Future Saxomat-equipped models, incidentally, will have a larger brake pedal, suitable for left foot operation.

Seating position on the bench seats is comfortable with armrests on both sides front and rear. Resting the left elbow slightly out the window can be uncomfortable in the four-door DKW because the front windows lack a fraction of an inch of going all the way down. Rear seat passengers, two comfortably, three a squeeze, have a reasonable amount of legroom, even for six-footers.

Driver visibility, so important yet so often overlooked, is near perfect. No blind spots in front and the wraparound rear window insure the same condition behind, along with no visible glass distortion.

Instruments, white numerals on dark gray, are grouped for safe, easy reading directly in front of the wheel: speedo on left; clock, center; and a combination gas gauge, generator light, temperature gauge, and high-low beam indicator at right.



Interior trim is on a par with the general finish details—good but not ostentatious. Upholstery over foam rubber is a durable, attractive cord cloth and leatherette. Hardware, paint, trim and general fit of the body inside and out are certainly superior to a number of cars costing much more. A sharp eye will note little niceties of detail such as the bolt heads inside the roomy trunk covered with protective rubber nipples to prevent luggage damage.

Esthetically, the DKW is well proportioned. However, as with most small cars, Americans have to accustom their tastes to the "peculiar" lines before all-out acceptance. One word of warning: Before asking any DKW owner how he likes his car, be prepared for a lengthy session. All whom we have found have become enthusiastic to the point of fanaticism—a healthy recommendation for any car.

ROAD TEST

IT IS SAFE to assume that when Morris Garages, Ltd., began experimenting and successfully competing with specially tuned versions of Morris Oxfords in 1923, the experimenters little dreamed that the end product of their labors would be the MG Car Company, currently one of the mainstays of the sprawling British Motor Corporation. For those early pioneers spawned a giant by British standards—a giant which has produced some of the finest and most exciting low and medium-priced sports cars in the world.

From the days when the MG Company was formed in 1929 to produce the now fabled "M" type midgets until the present, an enormous amount of development on the race courses and highways of the world has assured customers of quality merchandise. And now the evolution of the envelope-bodied "A" roadster into a roll-up window coupe version seems destined to introduce MG to many more persons. These people would be sports car enthusiasts if the price were right and if the car offered American-type weather protection. MG's coupe fulfills both these requirements and more, as we shall see.

Essentially, the coupe is mechanically identical to the roadster. The only differences in the two cars are in actual body areas relating to the top, and in richer appearing, more attractive interior trim in the coupe. MG's stylists have handled the difficult task of turning a roadster into a true coupe in excellent fashion. The finished product is esthetically pleasing, as well as highly functional.

PERFORMANCE

Max. speed in gears, 1st 32 mph, 2nd 53 mph, 3rd 79 mph, top 101.2 mph. Acceleration: from standing start to 45 mph 7.4 secs., to 60 12.3 secs., 1/4-mile 19.0 secs., and 73.6 mph. 30-50 mph 4.9 secs., 45-60 5.4 secs., 50-80 15.7 secs. Fuel consumption average for 815 miles 24.2 mpg.

SPECIFICATIONS

ENGINE: 4-cyl. ohv. Bore 2.875 in. Stroke 3.5 in. Stroke/bore ratio 1.22:1. Compression ratio 8.3:1. Displacement 90.86 cu. in. Advertised bhp 72 at 5500 rpm. Bhp per cu. in.: .79. Piston speed 3000 rpm. bhp 3206.3 ft. per min. Max bmeep 128.4 psi. Max torque 77.4 lbs.-ft. @ 3500 rpm.

TRANSMISSION: Hydraulically operated single dry plate Borg & Beck clutch, 8 ins. dia. 4 forward speeds, top 3 synchronized. Overall ratios: 15.652, 9.52, 5.908, 4.3. Rear axle ratio 4.3:1. (Optional 4.55:1.)

CHASSIS: Box section frame, tubular cross member at transmission. 5.60 x 15 tires. Lockheed hydraulic brakes, front—2 leading shoe, rear—leading and trailing shoe, 10 ins. dia. x 1.75 ins. wide. Rack and pinion steering gear, with 28-ft. turning circle, 2.75 turns lock-to-lock.

DIMENSIONS: Wheelbase 94.0 in., overall length 156.0 in., overall height 50.0 in., overall width 57.3 in., minimum clearance 6.0 in., front tread 47.9 in., rear tread 48.8 in., weight 2120 lbs. (50.5% front, 49.5% rear), weight/bhp ratio 29.5:1.

PRICES: (F.O.B. port of entry): \$2750.

ACCESSORIES: H.M.V. radio \$65, heater and defroster \$65, whitewall tires \$45, adjustable steering \$17.50, wire wheels \$135, luggage rack \$49.95, windshield washer \$17.50.

ASBESTOS shields carburetors from exhaust manifold in compact engine installation. Unusual door handles resemble hold-down bracket for top.

Unique vertical door handles, which reminded several observers of hold-down clamps for a removable hard-top, wrap-around windshield and rear windows, and the small but efficient no-draft windwings give the coupe all the essential creature comfort features of many big cars.

Open the rear-hinged bonnet and the first impression is that here is an engine compartment with no waste space where nearly everything is readily accessible. The four-cylinder, ohv engine, which cranks out a healthy 72 bhp at 5500 rpm from its just under one and one-half liters of displacement, is neatly positioned, facilitating changing of plugs, checking of oil and other essential service items. The two SU carburetors, adjacent to the exhaust manifold, are separated from it by an asbestos covered shield. The hydraulic master cylinder for brakes and clutch sits up high on the left-hand side of the firewall.

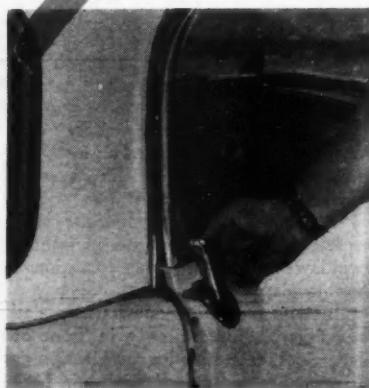
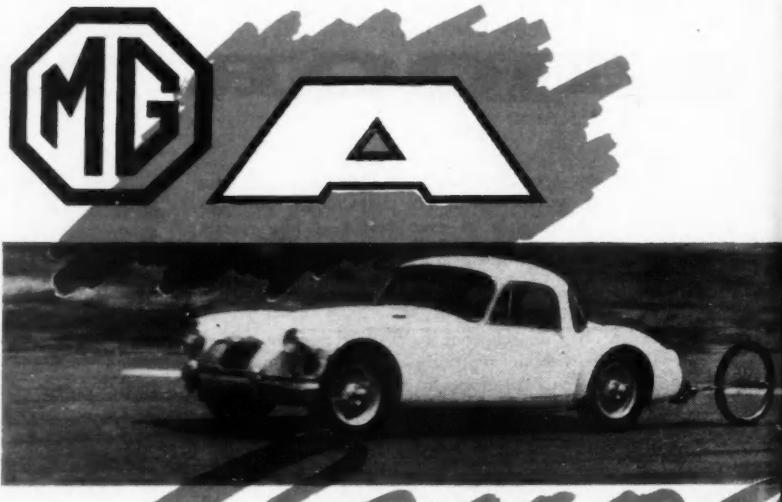
The coupe's body follows the same high quality finish as the roadster's. Bumpers offer considerable protection in comparison to most sports cars. Body panels are

ripple-free and fit well. The grille is vulnerable and "A" owners are keeping several independent grille guard firms in business.

The trunk compartment is admittedly small with the flat-mounted spare tire taking up a great deal of room. Luggage stowing requires ingenuity. As usual, MG includes a complete set of tools which strap to the bulkhead above the spare. The trunk is opened by an inside handle behind the driver's seat.

Design of the coupe's chassis has been carried out with rigidity and strength in mind. What was a strong frame for the roadster becomes even stronger with the addition of a steel top. Sweeping the frame out at the mid-section allows for a low seating position between the rails rather than above them.

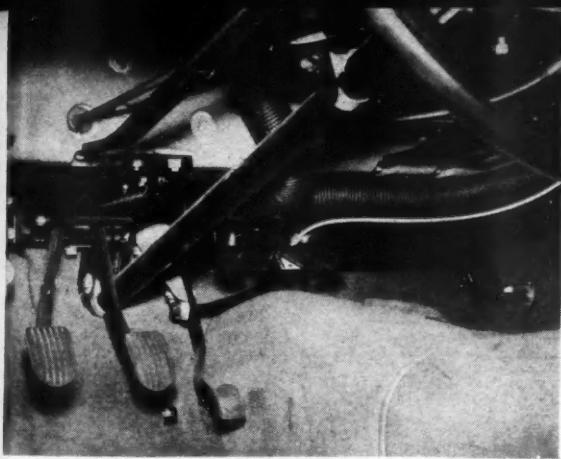
Surprisingly enough, front suspension is identical with previous TD and TF models, utilizing coil springs with unequal length wishbones and hydraulic shocks. At the rear, two longitudinal half-elliptic springs with double piston hydraulic shocks complete the conventional layout.



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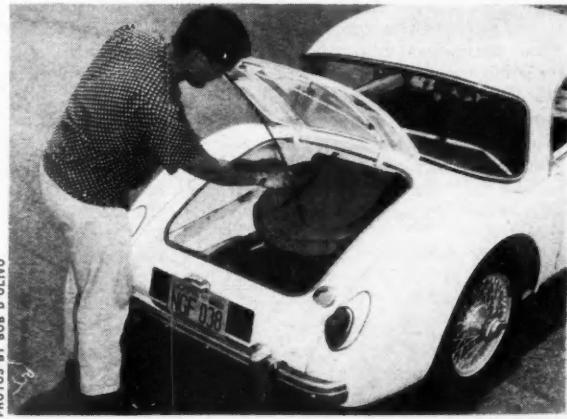
PENDANT PEDALS are too close together, do not offer sufficient room. Throttle-to-brake foot pivot is easy.



INTERIOR DETAIL is more luxurious than roadster, instrument layout unchanged. Short throw shift is ideal.



STORAGE SPACE behind leather-covered bucket seats is negligible, is reduced by spare projecting from trunk.



TRUNK CAPACITY is limited, requires ingenuity to stow luggage. External rack is available as optional extra.

An MT Research Report by Allan Stockton

Roadholding, however, is anything but conventional. Feather-light rack and pinion steering responds to the slightest pressure and recovers naturally. Body roll in hard corners is very slight and the car can be powered through at speeds which should be confined to the race course. There is no tendency to swap ends, and with a little practice, a skillful driver can put the "A" into a four-wheel drift, recovering by easing up on the throttle and correcting with the wheel. A contributing factor to good handling is excellent weight distribution—very near 50-50 with a full tank of Mobilgas in the test car.

A high speed run across several miles of undulating desert highway proved conclusively that the coupe doesn't wallow coming out of dips and feels secure on most any road condition. In effect, cruising speed is limited only by traffic conditions and good sense. The car feels as solid and safe at our indicated top speed of 102 mph as it does at an easy 60. Incidentally, maximum speeds in gears as listed in the performance chart are speeds at which valve bounce was audible.

Safe high speed is a function of good brakes. The coupe's pass with flying col-

ors. Fade can be induced but it takes an inordinate number of panic stops. For all practical purposes, the brakes are fade-, swerve- and grab-free. During a genuine emergency stop, I had occasion to lock all four wheels laying down two absolutely straight black strips of rubber.

Ride can be classed as comfortable sports car, firm but not rough. There is just enough road feel to let you know what sort of surface you're on. Personally, I feel that the bucket-type seats in the coupe do not offer enough support in the small of the back for long trips but this is a minor annoyance in relation to the plus factors of the car.

As with many sports cars, entry can be tricky. The doors open only about 70 degrees and from the front of the seat to the front of the door cutout is approximately ten inches—not any too much legroom. Duck your head and you're in—headroom is good once you're inside. Passenger stretch-out space is adequate and a center mounted armrest is a nice touch. An armrest on the driver's door would be appreciated, as would an ashtray.

The car starts quickly, hot or cold, and we found it unnecessary to use the choke.

A short, tunnel-mounted gear lever is within easy reach of the wheel and does its job in a precise, crisp fashion. This is one of the major joys of driving the coupe. Vision is good with no blind spots. A quick look through the wheel brings the easy-reading speedometer and tach into ready view. The oil pressure-water temperature gauge is "out in right field" and a number of drivers who race their MG's have reversed this instrument with the gas gauge, making for a simpler quick view of this vital information. A foam rubber strip at the top of the leather-covered recessed dash is an added safety feature.

The roll-up windows, which will probably sell as many coupes as any single feature, crank all the way down at a rapid one and one-half turns. At 50 mph with windows down, there is a distinct drumming, but opening the windwings stops it.

With production currently set at some 200 coupes per month, the MG Car Company should have little difficulty in selling a good portion of them in the U.S. Residents of colder climates can no longer claim that MG's are only for outdoor types. This neat little package is liable to make an enthusiast out of Grandma.

ROAD TEST

An MT Research Report by Wayne Thoms

TRIMPH'S VENTURES into the sports car field, dating back over 25 years, were notably unspectacular until the advent of the TR-2 with one interesting though short-lived exception—the Dolomite Specials of the '30s. Designed by famed Donald Healey, they featured a straight-eight engine with double overhead camshafts, a blower which boosted output to 140 bhp, and a guaranteed 100-plus mph.

Unfortunately, only a few were ever built and transportation vehicles pretty much made up Triumph's production, even after they were taken over by the Standard Motor Company in 1945. It was not until the London Show of 1952 that the first TR-2 was unveiled—a squat, businesslike roadster designed to be turned out in quantity at low cost. Enthusiast's appetites were whetted and two years later deliveries commenced in the United States.

Technical development of the TR-2 through the current TR-3 model has followed a course of careful, conservative evolution rather than revolution. Appearance, except for a flush-mounted grille, has changed very little. About the worst thing that can be charged against the Triumph is the fact that some consider its body lines uninspired. Aside from this—strictly a matter of personal opinion—a few hundred miles behind the wheel make you wonder why anyone could possibly want an engine larger than two liters displacement in a sports car.

In fact, Triumph's two liters (121.5 cubic inches) comes very close to being the ideal engine size in the TR-3. The overhead valve four, developing its 100 bhp at 5000 rpm, is not an especially modern design in comparison to some of the ultra-short stroke engines on the market. The engine is a warmed-up refinement of the Standard Vanguard mill with bore decreased through use of thicker wet cylinder liners to bring engine size into a more favorable racing class. Modern or not, one unalterable fact remains—it is one of the sturdiest, most trouble-free and reliable engines going today. It has plenty of low end torque, good mid-range performance and the ability to take long periods of high speed running.

Gear changes are crisp and firm with no feeling of excess play in the linkage. The short throw lever, operating remotely, sits atop the transmission tunnel—an easy, natural reach from the steering wheel. The optional Laycock-de Normanville overdrive (\$160), acting on the top three ratios, offers a fascinating seven forward speeds which can be engaged or locked out without removing the hands from the wheel. A simple toggle

PERFORMANCE

Max. speed in gears, 1st 36 mph, 2nd 55 mph (o.d. 62 mph), 3rd 84 mph (o.d. 87 mph), top 107 mph (estimated). Acceleration: from standing start to 45 mph 5.4 secs., to 60 9.2 secs., $\frac{1}{4}$ -mile 16.9 secs. and 81.9 mph, 30-50 mph 3.1 secs., 45-60 3.2 secs., 50-80 8.0 secs. Fuel consumption average for 441 miles 23.1 mpg. (101 miles on highway with heavy traffic, 60-65 mph, using o.d. 30.7 mpg.)

SPECIFICATIONS

ENGINE: 4-cyl. ohv. Bore 3.27 in. Stroke 3.62 in. Stroke/bore ratio 1.1:1. Compression ratio 8.5:1. Displacement 121.5 cu. in. Advertised bhp 100 @ 5000 rpm. Bhp per cu. in. .82. Piston speed @ max. bhp 3018.3 ft. per min. Max. bmmep 145.8 psi. Max. torque 117.5 lbs.-ft. @ 3000 rpm.

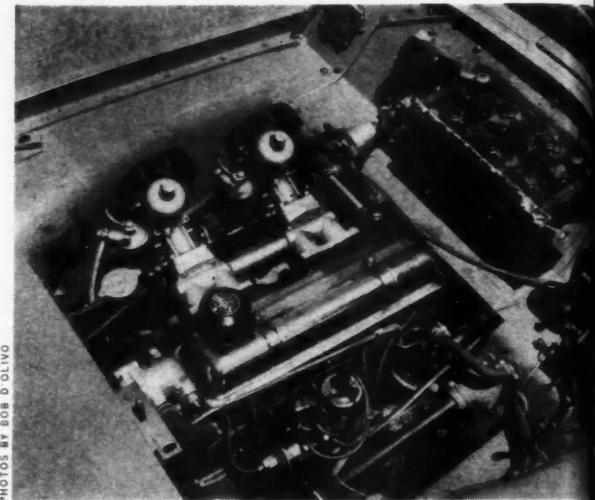
TRANSMISSION: Hydraulically operated single dry plate clutch, 9 in. dia. 4 forward speeds, top 3 synchronized. O.d. available for top 3 gears—electric, positive. Overall ratios: 12.5, 7.4 (o.d. 6.07), 4.9 (o.d. 4.02), 3.7 (o.d. 3.03). Rear axle ratio 3.7:1. (Optional 4.1:1, available with o.d. only.)

CHASSIS: Rigid structure, channel steel pressings with "X" cross member. 5.50 x 15 tires. Brakes: Front—Girling hydraulic caliper disc, rear—drum with leading and trailing shoes. Cam and lever steering gear, with 34-ft. turning circle, 2.3 turns lock-to-lock.

DIMENSIONS: Wheelbase 88.0 in., overall length 151.0 in., overall height 50.0 in., overall width 55.5 in., minimum clearance 6.0 in., front tread 45.0 in., rear tread 45.5 in., weight 2200 lbs. (53% front, 47% rear), weight/bhp ratio 22:1.

PRICES (F.O.B. port of entry): Roadster \$2625, hardtop \$2790. (Slightly higher in the West.)

ACCESSORIES: Soft top kit (in addition to hardtop) \$100, heater \$40, wire wheels \$111, chrome wire wheels \$200, overdrive \$160, adjustable steering \$20, rear passenger seat \$63, tonneau cover \$35, Dunlop High Speed tires \$24, competition shocks and springs (fitted at factory) \$8, alum. engine sump \$20, fitted trunk suitcase \$48.



PHOTOS BY BOB D'OLIVO

ACCESSIBILITY is keynote for engine compartment with most components in easy reach for minor maintenance.

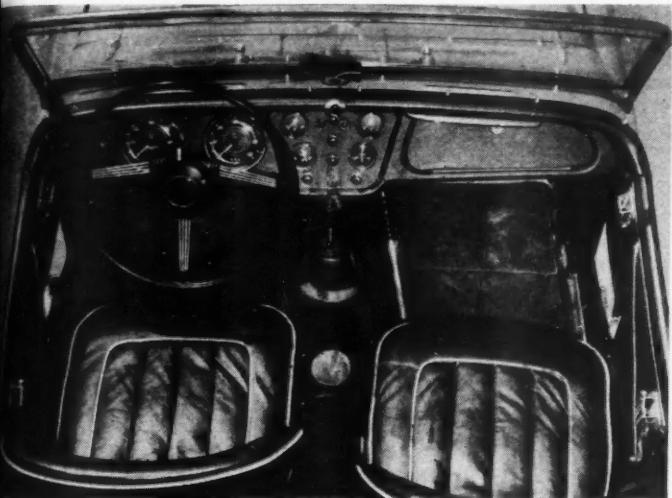
switch on the left side of the dash makes this possible. Traffic will probably find you running all but the very slowest portions in direct third gear, switching into third overdrive when conditions warrant, making for a good deal of clutchless city driving. Aside from its novelty value—and it's being fun to operate—the overdrive becomes a wonderful highway cruising gear which boosts already excellent gas mileage into the phenomenal class.

Chassis and suspension remain little changed from the first TR's. Frame is a very stiff channel steel unit with an "X" cross-member. Front suspension is independent with coil springs and tubular shocks and rear consists of two semi-elliptic, longitudinal leaf springs. The most important single mechanical improvement has been the addition of caliper disc brakes in front. Disc brakes have a number of virtues, not the least of which is resistance to fade due to superior cooling characteristics. A series of panic stops from 60 mph just short of locking wheels produced smoke in amazing quantities from around the brake pads beginning at the sixth stop, some slight odor, a very little fade and a slight swerve to the left—all evils which would have been magnified greatly with conventional drum brakes.

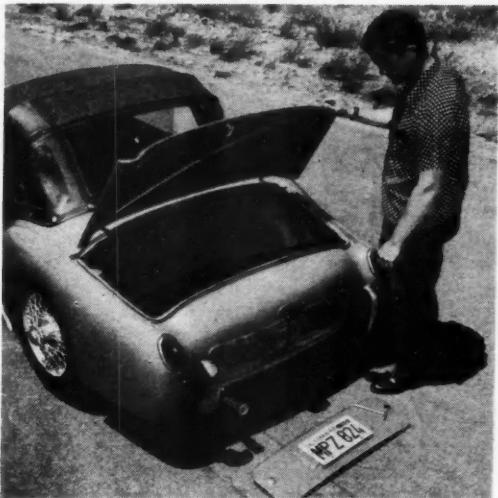
In practical usage the discs are fade-free, new pads can be installed in a matter of minutes, and they are said to be self-cleaning and unaffected by water. This is certainly a boon to wet weather drivers and a fine no-extra-cost bonus on a medium-priced sports car.

Fit of body panels is uniformly good, as are paint finishes and bright work. Hood, deck lid and spare tire compartment just below the trunk open with a special "T" handle which one takes care not to lose. An integrated latching device, doing away with the loose handle for these three parts would be appreciated. The rug lined trunk compartment, spacious enough for a couple of small suitcases, locks with a separate key which also fits the glove box. Maximum utilization of trunk space can be assured through use of a fitted suitcase offered as a TR-3 accessory. Should there be occasion to tear into the engine, space and accessibility under the bonnet are very good. Incidentally, a chronic seeping of hydraulic fluid from the brake and clutch master cylinder on previous models has been corrected by redesigning the fluid reservoir.

As for interior, the TR-3 can probably lay claim to having more, or at least as much, legroom as any other sports car. Sliding the driver and passenger seats full back makes the car comfortably adequate for a pair of six-and-a-half footers. The leather-covered bucket seats offer fair support but can be tiring on long trips. On the passenger side, the seatback pivots forward for access to an extremely roomy package space behind the seats. An optional rear seat is available but we cannot recommend it

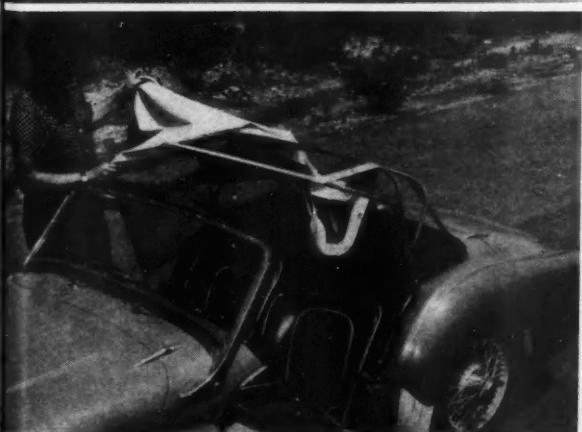
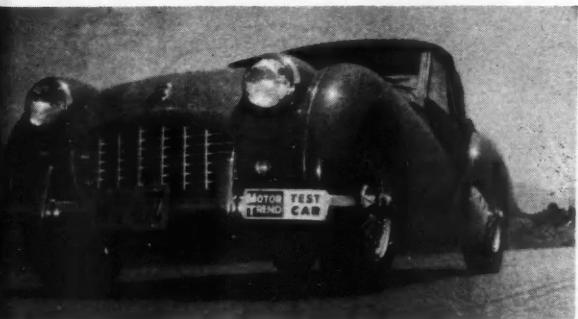


ROOMY COCKPIT offers honest sports car styling with plenty of hip and legroom. Bucket seats could give



more support. Luggage space is small but of useful size and shape while spare rests in separate compartment.

TRIUMPH TR-3



except for small children—there just isn't adult size legroom in the back. A slightly wider door cutout would make entry easier.

Instruments are just where they should be and the dash is recessed to prevent glare. Speedo and tach are large and directly in front of the driver while oil pressure, gas gauge, water temperature and ammeter are centered on the dash. White numerals on black with good night illumination make everything readable. The large, locking glove compartment and two roomy door pockets offer plenty of incidental storage although why there is no ashtray or cigarette lighter, we cannot fathom.

One of the best looking sports car soft tops we have ever seen comes with the basic TR. Wraparound plastic windows make for excellent visibility, and the side curtains, with their sliding plexiglass windows, are as functional and sturdy as any on the market. The top, extremely weather tight, unsnaps completely and stores safely in the trunk while the bows fold neatly behind the seats.

The TR-3 also comes in a hardtop version, approximately \$165 higher than the roadster. While the steel hardtop is removable with eight hold-down bolts, difficulty of installing the fittings makes it impractical to buy the soft top version with the idea of purchasing the hardtop later.

The TR-3 handles beautifully at all speeds and exhibits no serious vices in the corners. There is a good feel of the road and the ride is firm though not unpleasant. A combination of short wheelbase and washboard roads will make for a choppy ride. In normal-to-hard dips there is very little rebound and oscillation, with no wallow at high speeds. It is a fairly simple matter to drift the car and the steering is about neutral, neither under- nor oversteer. Hard corners will induce more body roll than feels safe, but addition of the competition shocks and springs will stop this with a slight sacrifice in riding qualities. The engine sounds and feels smooth well past the 5000 rpm red-line—which most drivers exceed in competition—but they are strictly on their own. Piston speeds become dangerously high in this range.

As you may have guessed, we liked the TR-3. At the price, it is easily one of the best all-purpose sports car buys on the market. Acceleration, top speed, smart, precise handling, luggage space and driver-passenger comfort make it hard to beat. Along with this, an extensive dealer network and well-stocked parts warehouses make it a practical buy and fun to own.

◀ REMOVABLE TOP, good weather protection when up, stows neatly in trunk, is quite simple for one person to erect.

A PINCH OF SPICE has been added to the 1957 version of the Volvo PV-444. Outwardly the car retains the same appearance as the earlier model and the most prominent clue to a change is a slight grille modification. As we were soon to discover, the new bit of pepper is under the hood.

As you seat yourself behind the wheel, you will find that the car seems to be tailored to fit you. The wheel falls into your hands and you see over the top of the rim. Your feet readily find the pedals and the short-throw, floor-mounted gearshift represents the welcome return of an old favorite to many. There is no searching for information from the instrument panel. The instruments are grouped to be seen by the driver and the dial contrast is excellent.

It would perhaps be nicer if the front seats were so designed that the padding did not produce a rounded effect which gives a feeling of sitting *on* them rather than *in* them. In the back seat we found a roominess which pays tribute to the good space utilization in a compact design. The front seats are cantilevered back from a front mounting which leaves ample toe room for rear seat passengers. The wide doors are a great assist to getting in and out of all seats.

Getting back to the spice—the little four-banger under the hood has been increased from 70 to 85 bhp by virtue of a greater bore and increased compression ratio. You get an inkling of things to come when you turn the key starter and first hear the crisp, sharp and non-American exhaust note. A little patience is re-

quired after you start the engine because it has a slightly longer than average warm-up time.

As we wound the engine up in first and second gears we became aware of a marked improvement in the low-speed torque characteristics of the new engine. It is still necessary to keep the revs up to take advantage of what is in the engine; however, it "comes on" quicker. We proved this point on the drag strip. Our standing start to 60 mph time averaged 16.3 seconds which is 2.5 seconds better than we did with the smaller engine. To cover a quarter mile from a standing start took 20.3 seconds and we were doing 67.6 mph at the finish line. This was 4.6 mph faster than our speed last year.

Nothing has been lost of the excellent Volvo riding and handling characteristics in this new model. The ride is firm enough

to give a feeling of stability without jolting hardness or wallowing mushiness. You come out of sharp dips at high speeds without bottoming or dangerous pitching. There is no excessive body lean in sharp corners and an absence of nose dive during very hard braking. These factors can be ascribed to the excellent snubbing and control of the coil spring suspension and the good weight distribution which holds the proportion on the front wheels to 52 per cent.

Good weight distribution is also reflected in the steering. Response to the wheel is quick and positive and there is neither a hair-trigger lightness nor a heavy feel at any speed. The three turns of the wheel lock-to-lock make the car most maneuverable and very easy to park. There is no hint of wheel fight, practically no road shock and if you release your grip on the

ROAD TEST

PERFORMANCE

Max. speed in gears, 1st 32 mph, 2nd 62 mph, 3rd 95 mph (factory rating). Acceleration: from standing start to 45 mph 10.1 secs., to 60 16.3 secs., 1/4-mile 20.3 secs. and 67.6 mph, 30-50 mph 6.8 secs., 45-60 5.8 secs., 50-82 19.6 secs. Fuel consumption average for 280 miles 23.8 mpg.

SPECIFICATIONS

ENGINE: 4-cyl., in-line ohv. Bore 3.125 in. Stroke 3.150 in. Stroke/bore ratio 1.01:1. Compression ratio 8.2:1. Displacement 97.0 cu. in. Advertised bhp 85 @ 5500 rpm. Bhp per cu. in. .88. Piston speed @ max. bhp 2888 ft. per min. Max. bmmpe 135 psi. Max. torque 87 lbs.-ft. @ 3500 rpm.

TRANSMISSION: 3 forward speeds, 2nd and 3rd synchronized. Ratios: 3.13:1, 1.62:1, 1.00:1. Rear axle ratio 4.55:1.

CHASSIS: Unit chassis/body construction. Front suspension—Independent wheels with coil springs, control arms and hydraulic shocks. Rear suspension—beam axle with coil springs, support arms, traction rods, track rod and hydraulic shocks. 5.90 x 15 tires. Self-centering hydraulic brakes with automatic adjustment. Worm and sector steering gear, 3 turns lock-to-lock, 13.9:1 overall ratio.

DIMENSIONS: Wheelbase 102.5 in., overall length 177.0 in., overall height 60.3 in., front tread 51.0 in., rear tread 51.8 in., weight 2180 lbs. (52% front, 48% rear), weight/bhp ratio 25.65:1.

PRICES (F.O.B. port of entry): Two-door sedan \$2095, Station wagon \$2345.



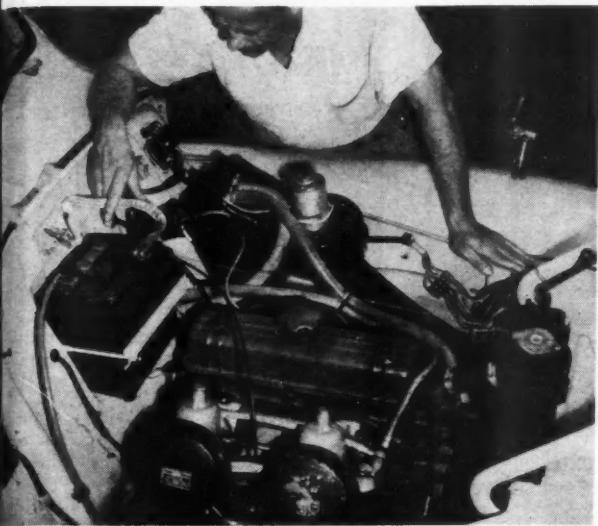
VOLVO

PV-444

An MT Research Report by Robert C. Scollay

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COMPACT DESIGN places the car in class between large and small. Engine adjustment points and all service points are easily reached. Note the six-volt battery.

wheel in a turn, the car will return to a straight path.

Vision from the driver's seat can be considered good. Some slight interference is set up by the windshield corner posts, but on the other hand the flat glass in this V-type windshield does not have the usual corner distortion of a wraparound. The sweep of the electric wiper blades clears a most adequate area of the glass. The rear window is necessarily small because of the design, but here again it has only a gentle curvature and there is no evident distortion. Drivers will have to learn how to compensate for a small blind area at the rear right body corner.

To release the positive-type hood latch-

ing mechanism on the Volvo, you pull the handle on the firewall under the dash; reverse the operation when the hood is closed. Coupled with a front hinge, this should guarantee that the hood will never fly open while you are under-way. The engine compartment is neat and uncrowded. Minor engine adjustment points and the usual service points are reached very easily. We noted with interest that this is one of the few cars—especially among those of foreign manufacture—that retain a six-volt electrical system.

Luggage space in the trunk strikes a good balance with passenger space in the body. The spare is stowed at the extreme left and in an upright position. This leaves

a good-sized flat floor area for other stowage.

Our general impression of the Volvo is that it is a good compromise between the small car and the so-called full-sized car. It is quick and agile in city traffic, and its good acceleration and top speed should keep you out of the laggard class on the open highway. Its size and weight are reflected in its gasoline consumption. We drove the car very hard and did everything in the book contrary to trying to obtain good mileage. We are aware that the tank average of 23.8 mpg could have been increased by at least five mpg had we been a little more conservative. In all departments, this is a good car.

DRIVING POSITION is comfortable, with the gear shift lever conveniently close to driver's right hand. Instrumentation is excellent.



SENSIBLE MOUNTING of spare contributes to usable space in the well proportioned trunk.



PHOTOS BY BOB D'OLIVO

Vauxhall Victor

ROAD TEST

by Lorne Parton

FIRST SIGHT of this four-cylinder English product in your local Pontiac showroom will make you think it's General Motors' new small car. From the wraparound (and near-distortion-free) front and rear windshields, to the Buick-like bumpers, this is a truly designed-in-Detroit model.

Inside the similarity continues. Except for the absence of the familiar GM window cranks for the quarter windows, the car's appointments are strictly à la Pontiac. First thing the driver notices when he sits at the controls is the small (16-in. diameter) steering wheel. The speedometer is well located in front of the driver, and the magnified odometer is clearly seen. The only true gauges are the ones for fuel and temperature. The dash bottom, where the heater is fitted, is a duplicate of the front and rear bumper motif. With its chromed knobs and protuberances, it looks like a knee-banger for the occasional middle passenger in the front seat.

Pedals, as in most British cars, are small and well spaced. Drivers with wide shoes won't be hitting the brake and accelerator at the same time.

Entry into the rear "step-down" is at best difficult, and almost impossible if the front seat is set back for a six-foot driver. The doors close with a nice "thunk."

The seat, adjustable fore-and-aft only, is very comfortable and holds the driver in a position good for many miles. Vision

is excellent, with wide window area, thin posts and sloping hood.

Only one thing marred vision on the test car. The speaker for the radio was located on the shelf behind the rear seat, and it was covered with a bright chrome grille that reflected sunlight directly onto the rear window and into the driver's eyes out of the mirror.

As a glance at the performance figures will indicate, the car is short on acceleration; its figures corresponding roughly to those of a Volkswagen. Once the driver has made up his mind he's not going to win any stop light Grand Prix, the car is a barrel of fun to drive.

Steering is precise, easy and quick. Little road-rumble is translated through the steering wheel, and you can make a U-turn (if it's legal) on an ordinary street without all of the accustomed backing and filling. The car whips around corners without any tendency to break loose, but there is more than moderate lean. The little 13-inch tires seem to threaten to roll under but don't squeal excessively.

Brakes get top marks. The car has 92 square inches of lining surface, equal to the number of cubic inches displacement. No sign of fade was detected in successive panic stops from 50 mph. Several hands-off stops brought the car to a straight halt each time.

Springing of the orthodox independent coils in front, leaf rear, carried the Victor



WRAPAROUND VISION is great from adjustable, comfortable front seat.

over a half-mile of deep ruts and washboard at around 40 mph with no bottoming. The unit construction body is typically free of rattles and squeaks, and there is little of the drumming you usually get with this type of construction.

The trunk is amazingly roomy for a car of less than 100-inch wheelbase. Not only is there room for golf clubs; you could put your caddy in it, too.

At the time of test, no one at Bowell-McLean Motors, in Vancouver, B.C., where we obtained the test car, knew when or if the cars would find their way into the U.S. At a probable U.S. price of \$2195 this could give the Volvo and Simca a good deal of trouble.



PERFORMANCE

Max. speed in gears, 1st 25 mph, 2nd 50 mph, 3rd 72 mph. Acceleration: from standing start to 45 mph 15 secs., to 60 31 secs., 1/4-mile 26.3 secs. and 56 mph, 30-50 mph 15.5 secs., 45-60 17.1 secs. Fuel consumption 28-31 mpg.

SPECIFICATIONS

ENGINE: 4-cylinder L-head. Bore 3.13 in. Stroke 3.00 in. Stroke/bore ratio .96:1. Compression ratio 7.8:1. Displacement 92 cu. in. Advertised bhp 54.8 @ 4200 rpm. Bhp per cu. in. .59. Max. torque 85 lbs.-ft. @ 2400 rpm.

TRANSMISSION: 3 forward speeds, all synchronized. Ratios: 3.186, 1.635, 1. Rear axle ratio 4.125:1. Hydraulically assisted clutch; single dry plate, spring loaded center; 7.25 in. dia.

CHASSIS: Unit construction, integral chassis. Front suspension—coil springs. Rear suspension—leaf, 5.90 x 13 tires. Hydraulic, 92 sq. in. brakes. Recirculating ball-type steering gear, with 34-ft. turning circle, 3.5 turns lock-to-lock, 13.5:1 overall ratio.

DIMENSIONS: Wheelbase 98 in., overall length 166.5 in., overall height 58 in., overall width 62 in., minimum clearance 6.5 in., front tread 50 in., rear tread 54.9 in., weight 2130 lbs. (2150 Super), weight/bhp ratio 38.8:1.

PRICES: Victor, F.O.B. Vancouver \$1895; Victor Super \$1995. Price in U.S. to be announced.

ACCESSORIES: Heater and defroster, turn signals standard. Radio \$120.95. No power accessories.



PHOTO BY BOB OLSEN

SPACIOUS TRUNK is typical of the big-car features of Vauxhall Victor. GM styling influence is evident in Buick-like bumper treatment. Note the rear seat cross-bracing.

Our European Rumor Mill

has been working overtime lately. By the time this appears in print, some of the grist may have proven to be chaff; nevertheless, these rumors are of definite interest to all of us.

A. C. has possible price reduction coming up in Ace Aceca . . . Alfa-Romeo is contemplating price increase in 1600 series, will provide Zagato bodies on some . . . Allard trying again with slightly changed Palm Beach Model . . . Arnolt-Bristol to have new body . . . Austin will have Borg-Warner automatic transmissions on their modernized 95 and 105 series, will have a really new 55 model ready. Healey may get new front end and automatic transmission also . . . Bentley will have an American-type convertible as a "production" model at \$16,500



CORONET three-wheeler now powered by a two-cylinder is due to be replaced by a four-wheeler, probably using the Standard four as used in the Austin A-35 and the Morris 1000.

. . . BMW-Isetta to have 4-seater, twin-cylinder engine. The 507 model to go for \$7600-7900; 503 to go for close to \$8800

. . . Borgward to have larger engine, automatic transmission, same body styles . . . Citroen planning big sales push behind DS-19, not ID-19. 2-CV still to be price leader . . . DKW to produce Dauphine-like car for \$1500, with cruising speed of 75 mph, sports car called Auto-Union Type R capable of 100 mph . . . Ford to have automatic transmissions almost across board. Big sales push planned . . . Jensen, at \$4900, to be sold by some Austin dealers . . . Lancia plans new pretty sports car in M-B 190-SL market, at price of \$5000 . . . Lloyd pulling in horns, with deliveries almost stopped . . .

Jaguar will sell Mark VIII on demand, but 3.4 and XK-150 coupe and convertible to be main line, with XK-140 roadster and revived XK-100 (old two-liter) to carry 2.4 engine as sport line competing against Austin-Healey

continued on page 43



ation: from
and 56 mph,

.96:1. Com-
pm. Bhp per

1. Rear axle
ded center;

springs. Rear
bal-
1.5:1 overall

58 in., over-
ad 54.9 in.

U.S. to be

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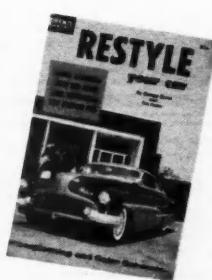
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sion of the axle to the frame to counteract deflections of the springs.

A Ford Ranchero was selected for the test because of the broad demands placed on the suspension in this type of vehicle. The Ranchero is a relatively softly sprung car but has more load-weight capacity than many standard pick-ups. With heavy loads aboard, it was felt that the flattened, high-deflection springs would offer a true test of what could be done to eliminate undesirable conditions encountered during acceleration, braking and other driving maneuvers.



TRACTION MASTERS on Ford Ranchero

The test resulted in the following observations: 1) There was a definite reduction in wheel hop or chatter on loose ground. 2) There was an almost complete elimination of spring surge when starting or stopping suddenly with heavy loads. 3) There was no loss of traction when traversing steep dips at an angle. 4) There was no change in riding characteristics.

—D. H. Moreton

Hillman Presents "Estate Car" Wagon



AN ELEGANT new station wagon joins the sedan and convertible to complete the Hillman Minx range, now one of Britain's top sellers in export markets. Described by Rootes as the "Estate Car" the new model has a wheelbase three inches longer than the old two-door job, but is slightly shorter overall. The height is cut by nearly 6½ inches.

As all seats are within the wheelbase, rear seat width is increased by 10 inches. With four adults on board, there is space in the rear for up to 400 pounds of freight. With rear seats folded to form additional platform space, there is room for two adults and cargo up to 700 pounds. At rear is a drop-down

tail gate and lifting full-width window. Body is of all-steel unit construction, and is well finished in usual Rootes style, with big choice of single or dual color schemes to enhance the appeal of this stylish town and country car.

Power unit is the latest 85-cubic-inch, ohv four-cylinder giving 51 bhp, a gain of four hp over the previous model. Tires are 5.50x15 and the rear axle ratio is 5.22 to 1 against 4.77 to 1 on the sedan. Price in England is £625 (\$1750).

—Gordon Wilkins

HILLMAN ESTATE CAR—Wheelbase 96 in. Track—front 49 in., rear 48.5 in. Length 160.5 in. Width 60.75 in. Height 61 in. Curb weight 2335 lbs. Brakes—Lockheed hydraulic, 8-in. drums. Fuel tank capacity 8.7 gals.

Our European Rumor Mill

continued from page 41

. . . **Lotus** to have "production" race car at \$3200 plus . . . **Mercedes-Benz** to have same line, higher prices . . . **MG** to have more horsepower . . . **Morgan** to eventually get Coventry Climax 1100 (67 bhp) engine . . . **Morris** to have new body shell . . . **Nash** to have a personal sports car, larger model Metro . . . **Panhard** to have larger tail lights, more parts and service through Citroen . . . **Peugeot** planning U. S. sales push . . . **Porsche** to raise prices . . . **Renault** to have more hp, lower price, more hop-ups . . . **Riley** to have redesigned Pathfinder, more chrome, more hp, same high price . . . **Rover** to have automatic transmission, more modern styling . . . **Saab** having trouble keeping Sweden interested in continuing support . . . **Simca** hp up, price down, more options available . . . **Singer** still has Fiberglas sports car with d.o.h.c. engine, but when? . . . **Skoda** trying again with dowdy, well-made cheap car . . . **Standard** will make Vanguard III available on demand with TR-3 engine . . . **Talbot** planning large price drop, to sell on order . . . **Triumph's** new model could be TR-4 with Fiberglas body . . . **Turner** dealers planning good sales, special may be supplied . . . **Volkswagen** to have larger rear window . . . **Volvo** will continue their PV-444 through '58, come out with a Karmann-bodied coupe first of the year, and the Amazon late in '58.



"... and stay in the spectator area!"

BLOWER BLOOPER

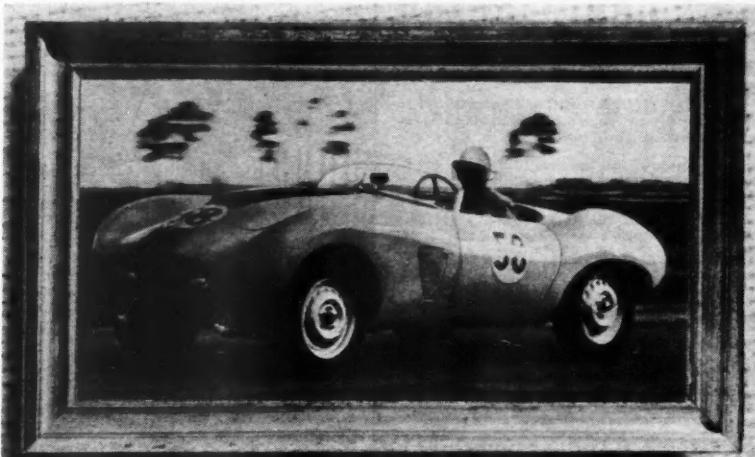
Our apologies to the Latham Mfg. Co. of West Palm Beach, Fla. for showing the wrong curve on our 50-80 mph acceleration test. We stated that the acceleration figures indicated the high efficiency of the Latham Axial-Flow blower, but a look at one curve on the graph shows otherwise. The actual change in performance, according to Engineering Editor John Booth, is phenomenal. Here are the correct figures:

Mph	Time in seconds	LATHAM
0-30	4.6	3.8
0-60	12.2	8.4
10-80	20.0	13.3
50-80	11.6	7.9

dow. Body
and is well
big choice
enhance the
country car.
inch, ohv
ain of four
are 5.50x15
1 against
in England

Wilkins

Track—front
width 60.75 in.
ke—Lockheed
8.7 gals.



Arnolt-Bristol Bolide . . . not easy to achieve is that balance between brute performance and all-around utility that marks the true dual-purpose sports car. In the Arnolt-Bristol Bolide, a most enviable competition record speaks for performance; quiet good manners in traffic and remarkable reliability speak for everyday usefulness. Except on the race course, you'll never need all the acceleration, braking power, and cornering ability built into the Bolide, but it's reassuring to know they're on tap.



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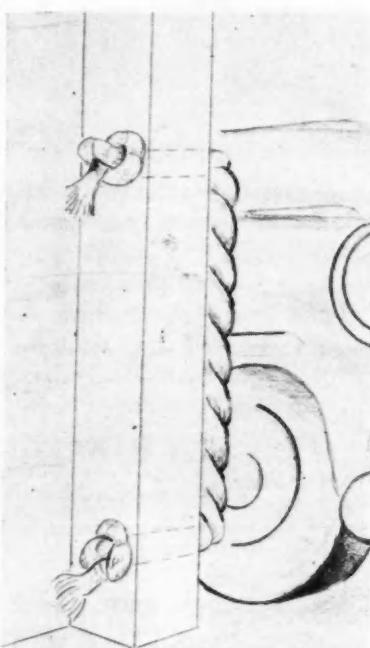
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ART CENTER SCHOOL

HANDY hints

by Rodger Darling



"FENDERS" FOR YOUR FENDERS—With garages getting mysteriously narrower every year, here's how to avoid scratching your new car in your close-squeeze garage doorway. Pad all points of possible contact with buffers of heavy, soft rope threaded through holes drilled in the door-jamb as shown in sketch.

CLEAN THE CLEANER—During dusty summertime (in fact, every 2000 miles) you should service your car's air cleaner, but any time the outside of the cleaner appears dirty it indicates that the inside is even dirtier, and the unit should be removed for cleaning. Considerable speeding-up of the idled engine as the cleaner is taken off discloses a very dirty or possibly defective cleaner. If filter unit (or oil bath) is found to be not dirty after a few thousand miles, chances are the cleaner isn't working right or air is by-passing it through a loose connection.

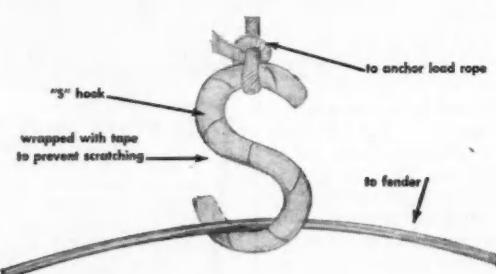
POOR MAN'S AIR CONDITIONER—If you haven't bought your automobile air conditioner yet this may help if hot weather driving becomes unbearable: Close the car windows, excepting one in the rear which should be left open a crack. Place a pail of ice cubes or dry ice on the floor directly beneath the heater or air vent (intake open). Air flowing in over the ice will keep your car cool, man . . . real cool.

NO CAN? CAN DO—What happens if hot weather evaporation makes the addition of water to your radiator a must without further driving—and you have no container in which to carry water? Just pry off a hub cap and use it to bring water to your panting car from that pond, fountain or faucet.

SPARE WEAR—Don't let the summer pass with any one tire loafing all season as a spare. More than ninety days disuse can deteriorate a tire more rapidly—particularly in heat above eighty degrees—than normal driving wear.

DE-BUG YOUR RADIATOR—Keep your engine from overheating by flushing out leaves and insects that block cooling air from the radiator core. You wouldn't drive around in warm weather with a blanket covering one-quarter of your car's radiator, yet that's the effect of the average collection of dirt, leaves and bugs. Give 'em the garden hose from the back side of the radiator next time you wash your car.

THEY SHOW UP—Paint your gas tank cap and oil filler cap bright yellow and there's less chance they'll be mislaid by service station attendants.



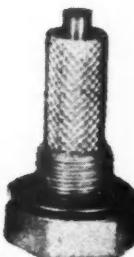
GOT A HEAVY LOAD TO LUG?—You'll be surprised at the cargo you can carry—canoe, camping equipment, ladder, lumber, linoleum, etc.—by cradling it across a couple of inflated inner tubes placed on the car roof, thus

providing an adjustable carrier that won't scratch or slip. Lash the load down tightly with ropes to the bumpers or door handles or, best of all, to tape-wrapped "S" hooks hooked to the fenders (see sketch).

700,000 Individual "Road Tests" Show You How MAGNA-POWER CAN HELP YOU CUT YOUR CAR OPERATING COSTS AS MUCH AS 30%

(It keeps your engine
young and powerful)

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IT MAY BE hard to believe that one small, new engine accessory can bring you such savings. But the proof is on file! From thousands of car owners come the sincere and grateful reports of lower oil usage, longer spark plug life and higher gas mileage with the Magna-Power Plug. Too many to be doubted—their reports definitely show how you too can expect equal savings with the Magna-Power Plug in the operation of your own car. Why?

Sulphur and other impurities found in all gasolines—even the "cleanest"—burn in your engines to form the corrosive, biting, destructive gases that eat out your muffler and tail pipe. Inevitably, even the newest and "tightest" engine allows small amounts of these same corrosive, biting, destructive gases to "seep" past the pistons and mix with your oil. The result?

They join forces with condensed moisture in the engine and the oil to make the powerful acids that eat out the insides of your engine. Attacking the pistons, rings, cylinder walls, bearings, valves, and the oil itself, these acids cause the wear that robs you of the full surging power your car had when it was new—they cause the gunk and goo that clogs and chokes your engine and keeps it on the downhill path to expensive operating and repair costs. Your own car, if over 6 months old, may already show the symptoms of this acid-caused damage in increased filter sludge and carbon deposits on pistons.

STOP ACID WEAR WITH MAGNA-POWER

Now letters are pouring in praising the work of Magna-Power in neutralizing acids, reducing wear and inhibiting sludge and carbon formation. Findings of the Canadian National Research Council (Canada's famed research organization) and the Southern Analytical Laboratories in Jacksonville, Fla. show that this metal used (1) effectively neutralizes corrosive engine acids, (2) greatly slows down the formation of sludges, gums

and resins that clog and choke the insides of engines and (3) destroys or holds in check the catalysts that cause oil break-down products that load up the combustion chamber and foul spark plugs (thus reducing preignition and internal shorting.) Also attached to the end is a powerful Alnico magnet that collects iron and steel filings from the circulating oil. These are easily removed from the oil pan.



(unretouched)

Filter and oil sample (left) from a car using a Magna-Power plug show less sludge and contaminants—both oil and filter are still clean. Filter and oil sample (right) from car without Magna-Power show normal heavy deposits at same mileage.



(unretouched)

Heavy carbon deposits are actually "baked" on the piston crown (right). Formation of carbon on piston (left) shows remarkable

difference when resins are inhibited by Magna-Power. "Build-up of carbon causes loss of power and increases oil consumption."

START GETTING THESE BENEFITS

With reduced acid wear and sludge formation your engine can give the surging power it was designed for. You will get quicker starts, faster pick-ups, less plug fouling and longer plug life. The great reduction of goo and gunk in the oil will often double filter life and oil changes run to 3,000 or 4,000 miles at normal driving and much more on long trip driving.

Actual engine measurements by an independent testing laboratory indicate that engine life may run as high as 250,000 miles before overhaul. This means that your engine WILL stay young and powerful far beyond any mileage you ever dreamed of!

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ever given to any
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WHAT USERS SAY:

LESS OIL USAGE

"After 60,000 miles, the motor in my Pontiac was just like new. I installed the neutralizer plug in it at about 8000 miles. It was using oil at that time. After installing the plug, oil consumption dropped to a minimum. I changed oil every 2000 miles without adding any between changes."

J.D.N.
Gainesville, Fla.

"I bought a 1953 Studebaker for which I bought a Magna-Power plug. I traded it in January 28, 1956 on a new Chevrolet Station Wagon. I drove the 1953 Studebaker 47,000 miles in 26 months and I still got 3,000 miles to a quart of oil. I changed oil at that time. I took a trip to Topeka, Kansas last September and I didn't change oil until I returned to L.A., approximately 5,000 miles. I used one quart on the trip. I am very pleased that I bought the Magna-Power plug. I believe it did wonders. I'd like one now for my Chevrolet V8 Station Wagon 1956."

M. H. B.
Los Angeles, Calif.

TRADE-IN VALUE HIGHER

"I have just traded my 1954 Ford for a 1957 model and am not wasting any time in ordering my Magna-Power plug. My car had 70,000 miles registered when I traded and can truthfully say I did not at any time burn any oil due to the Magna-Power oil plug and radiator insert. My car being above average in appearance and mechanically perfect brought me more than the book value. It was sold the same day for above the book value."

A. R.
New Rochelle, N. Y.

"Please send me a Magna-Power for a 1956 Mercury Montclair. Bought one a couple of years ago for a 1954 Mercury and I really got top trade in because the '54 ran so smooth."

R. A. P.
Edmond, Oklahoma

"Enclosed you will find my order for an acid neutralizer for my 1956 Ford. I used a Magna-Power neutralizer in my 1954 Ford which I drove 70,000 miles. I used only two sets of spark plugs during this mileage and after the plugs were cleaned during my periodic tune-ups, they tested almost as good as new. My gasoline mileage remained constantly good and the compression after 70,000 miles still checked out to new car specifications. The exceptionally good running condition of my car enabled me to get an unusually good trade-in price towards my 1956 car and the dealer sold my 1954 car within 24 hours after taking it in trade. I have been very enthusiastic in recommending your product to my friends and I certainly want to protect my new car with a Magna-Plug."

J. W. T.
Attleboro, Mass.

SPARK PLUGS LAST LONGER

"I am sending for my Magna-Power to put on our new car. We used our Magna-Power on our 1952 Oldsmobile and never had the spark plugs out after we put the Magna-Power plug in, almost 30,000 miles. When we traded it off, we were adding a quart of oil in about 3,000 miles."

C. R. D.
Boise, Idaho

"Put a Magna-Power plug in a 1950 Ford 6 with 50,000 miles on it. Installed a new set of plugs and points. At 90,000 miles I examined the plugs and I couldn't believe it. They looked like new. Hope you have a Magna-Power plug for my MG-TD."

K. R. C.
Jacksonville, Fla.

LOWER MAINTENANCE COSTS

"I must write you about my Magna Power on my Packard Taxicab. I installed it when the car had 27,000 miles on it and the car now has 105,000 miles and is still going fine, runs very smooth and is not hard on oil yet. My spark plugs have over 60,000 miles on them and look good for that much more. My car has no work on it in all that time. I change oil every 8,000 miles and sometimes more."

L. W.
Tomahawk, Wisconsin

"I have had one of these neutralizers in my 1952 V8 Chrysler 95,000 miles and engine is like new and I get 1500 miles to a quart of oil. It can save several hundred dollars in repairs. 'No work on motor only distributor points and spark plugs (16,000 miles now and still good) —no sludge.'

F.A.P.
Arbuckle, Calif.

LONGER ENGINE LIFE

"Please rush me a Magna Power Plug for my new Nash Rambler, I had one in my Hudson and also my Plymouth and they are both running and in perfect shape. The Hudson has 90,000 miles or more and the Plymouth has 65,000, neither one has had the head off."

C. A. W.
Jefferson City, Mo.

"I have just traded in my 1949 Plymouth, which I bought second hand. I installed one of your acid neutralizers in the car at about 25,000 miles and drove it to 103,000. I am very satisfied with the service I received from my car . . . I believe that the Magna-Power plug helped me to receive better than one hundred thousand miles from the same Plymouth engine. The only trouble I had with my car was a busted piston and it burned no oil when I traded it in."

D.R.P.
Minneapolis, Minn.

"In July 1946 I got delivery on my new DeSoto. Several months afterwards I read about the Johns Plug and ordered one. As of today that car has been over 120,000 miles and runs as good as it ever did. In 1955 I bought a new DeSoto, however I held on to my old car. Last year I put twice the mileage on the 1946 model as on the 1955. You see that after using one car for 11 years it is more like a faithful servant which has served me well throughout the years. The Johns Plug that I am ordering now is for my 1955 model car. Since the new car has only 5200 miles on it; the break in period should be far enough along to use the Magna-Power Plug."

D.M.L.
Birmingham, Ala.

PERFORMANCE DATA FROM MAGNA-POWER USERS

'55**Ford Fairlane**

Total engine miles	55,000
Total with Magna-Power	45,000
Spark plug life	5,000

User Comments: "After 55,000 miles I got 4,000-plus miles per quart of oil under any driving conditions. We're sold!"

E. E. L.
Toms River, N. J.

'54**Ford Country Sedan**

Total engine miles	61,467
Total with Magna-Power	50,000
Spark plug life	40,000

User Comments: "Plugs installed at 20,000 miles and they are still going with two cleanings. As a result of the excellent way my car performed I got a top trade-in value on my new car—about \$300 over average for the model year."

G. S. McE.
Decatur, Illinois

'53**Ford**

Total engine miles	67,700
Total with Magna-Power	52,000
Spark plug life	8,000

User Comments: "I was using 1 quart of oil to 900 miles. After installing Magna plug, oil mileage went up to 2,000. Motor was operating perfectly at 67,700."

H. A.
E. Boundbrook, N. J.

'53**Studebaker**

Total engine miles	55,000
Total with Magna-Power	28,000
Spark plug life	28,000

User Comments: "Installed Magna-Power at 27,000 miles. Traded car at 55,000 miles with same spark plugs. When plug installed, car used 1 quart of oil in 2,000 miles. When traded, it used less."

F. H.
Cookeville, Tenn.

'52**Buick**

Total engine miles	48,000
Total with Magna-Power	48,000
Spark plug life	35,000

User Comments: "Changed plugs at 35,000 miles but doubt they needed it then. Still running with as much power as ever and not burning any extra oil."

H. J. A.
Modesto, Calif.

'53**Porsche America**

Total engine miles	24,395
Total with Magna-Power	19,340
Spark plug life	18,000

User Comments: "Had frequent tune-ups before using Magna-Power, especially fouled plugs. Haven't had to take the plugs out in 18,000 miles. Engine runs like a clock."

E. C. D.
Mount Dora, Florida

'53**Chevrolet**

Total engine miles	46,924
Total with Magna-Power	21,924
Spark plug life	16,294

User Comments: "I still have the Chevrolet for which I bought the first Magna-Power. Believe it or not I get between 17 and 18 miles per gallon in the city and I still have the pickup that the car had when it was new. I have become one of your staunch boosters."

G. T. C.
Tampa, Florida

'53**Plymouth**

Total engine miles	22,400
Total with Magna-Power	14,000
Spark plug life	16,000

User Comments: "My mechanic is amazed that there is no grit on the dipstick whenever he checks the oil. I never change my oil except seasonally and even then it's not necessary. The spark plug mileage speaks for itself. The best investment I ever made."

M. F.
Brooklyn, N. Y.

'52**Plymouth**

Total engine miles	43,720
Total with Magna-Power	23,000
Spark plug life	23,000

User Comments: "I installed Magna-Power and new plugs at 19,000—never had plugs cleaned or gapped—sold car at 43,720 miles—had extreme pep and power—changed oil at 2,500 usually about 1 pint low—was averaging on road about 17.4 mpg—it's well worth the investment."

W. F. D.
Martinsville, Va.

WHY MAGNA-POWER IS NOT ORIGINAL EQUIPMENT

A new car, or one that has been rebuilt, should go through a break-in period. During the auto's first 1,000 miles rings are seated and the new engine, through a small amount of necessary wear, "loosens up" for maximum efficiency. The time to install Magna-Power in a new car is at the end of the break-in period when you change oil.



\$4.95

Pat. Appl. For

'55**Volkswagen**

Total engine miles	24,000
Total with Magna-Power	23,000
Spark plug life	24,000

User Comments: "Since installing your plug my spark plug set is still functioning well at 24,000 miles. 8,000 to 10,000 miles was my previous experience."

S. E. A.
Los Angeles, Calif.

'54**Ford**

Total engine miles	68,490
Total with Magna-Power	63,490
Spark plug life	23,000

User Comments: "Your plug looks very good. Still getting almost 2,000 miles before adding a quart of oil. Points have been good for about 23,000 miles."

J. H. S.
East Hartford, Conn.

YOU'LL WANT THESE BENEFITS FOR YOUR OWN CAR

If Magna-Power can increase your car's useful life, maintain its like-new performance and cut your costs of operation to a new low—isn't it worth the trial? We make no claims that are not substantiated by the successful experience of hundreds and thousands of car owners who have become satisfied users and endorsers of Magna-Power over the last few years.

30-DAY FREE TRIAL— SEND NO MONEY

Fill out the coupon and mail it to us today! Try the Magna Power for 30 days at our expense—we know from our thousands of satisfied users that you too will find it safe and effective.

Canadian orders filled from Toronto—190 Brookside Ave., Toronto 9—no duty, no red tape... \$4.95 each. Available for all European and U.S. cars, trucks, buses, etc. Indicate year and make with all orders.

(Use Margin If Needed)

MAGNA-POWER CORP., Dept. M9 Middlesex, N. J.

My car is a (make) (year)
Send me a Magna Power for my car on your 30-day FREE TRIAL. If I like Magna-Power, I will promptly send \$4.95 (plus 25¢ postage and handling). Otherwise I will return Magna-Power and owe you nothing!

SAVE—Send \$4.95 with order and we pay postage—handling—Money back guarantee.

NAME.....

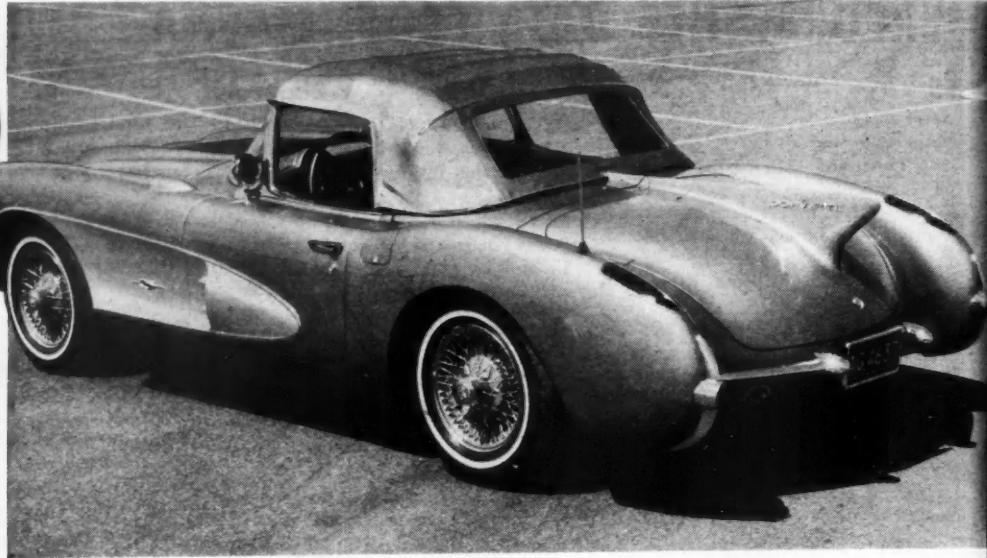
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GM STYLING SECTION'S CORVETTE

I'LL GIVE YOU a check right now for that car! Or, if you can't sell it to me now, can I order one? It is the '58 Corvette, isn't it?"

This, coming from a native Detroiter, struck me as completely contradictory to the usual blasé attitude of Motor City citizenry. Sure—he had probably seen pictures of this Corvette which was one of several that had been especially styled by the General Motors Styling Section as experiments in Fiberglas. But seeing a car in photos and seeing it in the flesh are two different things. Besides, I had no MOTOR TREND signs on it, the license plate was not a manufacturer's plate, and there was no other way for the prospective Chevrolet customer to determine if the car he was seeing was an early-released '58 model, or an even rarer custom job.

The major changes from a stock '57 Corvette that struck this particular individual (and others in the few days I drove the car in and around the Detroit area) were: the lengthened hood and dropped snout, the fin grafted onto the middle of the rear deck, the air scoops in the doors and the superb metallic blue finish with interior to match. Other slight styling differences were the covered tail lights, the fake hood louvers (making the hood twice as heavy because another Fiberglas lining was used to achieve the desired effect), parking lights and backup lights.

What styling features may be borrowed from this car for the '58 Corvette is a matter of conjecture at this time, but it's my guess that the longer look—for one—will show up. It would be relatively easy to make the scoops functional for brake cooling by putting an opening at the rear of each door with a corresponding opening in the front of each fender. It would also seem desirable to have a bit more protection for the parking lights which seem highly vulnerable to bumper bangers.

The chassis and fuel-injected 250-horsepower engine of this Corvette are what you can get at (m)any Chevy showrooms. The same goes for the four-speed gearbox. It has been impossible to trace the source of design for this box (simply because Chevrolet won't talk), but whoever's responsible should take a

deep bow. In print I've raved about the Mercedes-Benz 300-SL box and the Pont-a-Mousson box on the Facel Vega. *This one is every bit as good as either and/or both of them!*

The Chevrolet release we received a few issues ago states: "The four forward speeds of the new transmission are synchronized to provide a swift and smooth response. . . . The close ratio gears also permit easy downshift to make maximum use of the engine for braking as an added safety factor. . . ." They sure glossed over the facts!

When you can whip the stick around from one gear to *any other* the way you'd stir a can of paint, that's a gearbox that's synchronized. And when you can downshift from second to first at 40 mph *without* double clutching, that's slightly more than just an ". . . easy downshift . . ." Maybe this box is slightly better than the stock box you can order for an extra \$188.30 as a factory option, but I doubt it. This particular Corvette has been around in its present form since last fall, has been driven by many different people, and so—if anything—should be in worse shape than what you might expect to get from a dealer.

The outstanding improvement of the four-speed box over the three-speed (outside of the ease of shift) is the use of closer ratios. The ratios of the three-speed box are 2.21 to 1 for first, 1.32 to 1 for second, 1 to 1 for third. The four-speed ratios are 2.20 to 1 for first, 1.66 to 1 for second, 1.31 to 1 for third, and direct for fourth. These ratios allow you speeds of 50 mph in first at 5500 rpm, 66 in second at 5500 rpm, and 85 mph in third at the same rpm. At 4000 rpm in top gear, the Corvette was loafing at 80 mph, which would indicate that its top speed would be somewhere around 120 mph.

These close ratios allow not only for greater flexibility between gears, but for a quicker jump. A three-speed box and fuel injection can take a Corvette to 80 mph in a bit over 11 seconds. Just changing the box will get you there almost a second sooner. And that would appear to be soon enough.

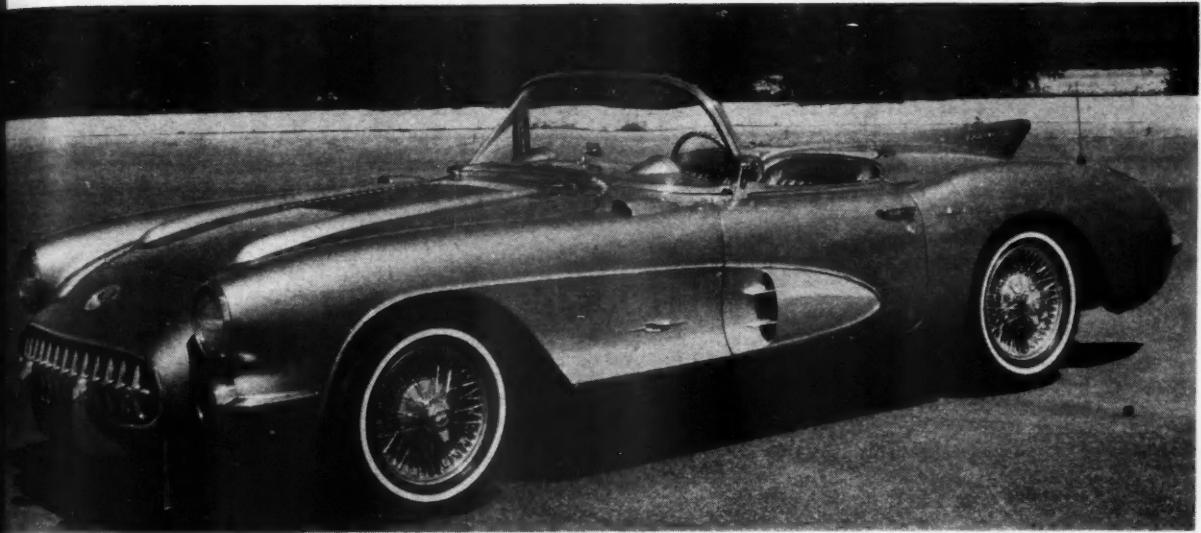


PHOTO BY JOE H. WHERRY

A FIN, A 4-SPEED GEARBOX..AND JUST A TOUCH OF '58?

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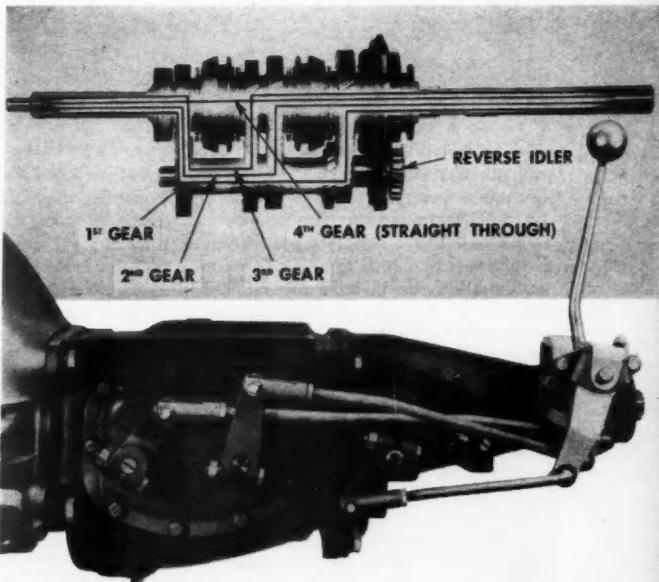
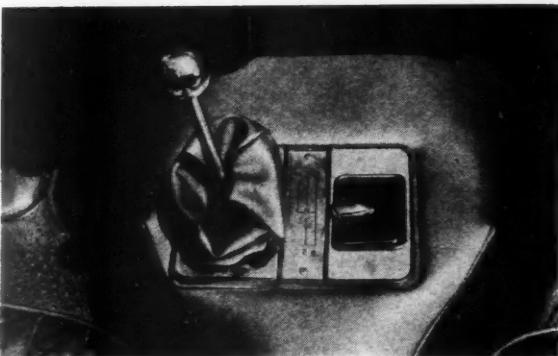
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BEAUTIFUL INTERIOR of the special Corvette is in handsome metallic leather. Pleated rolls are used on the bucket seats, beneath the pedals and as kick pads.



GEARSHIFT is close at hand, has standard H pattern with reverse off to left and up. Cutaways show short, sturdy linkage and power flow from engine via transmission.

THEY PROMISED ME ~~85~~ MPG

by William Carroll

IT SEEMS SO SIMPLE! All we must do is attach the devices to our V8, total gas savings each manufacturer promises, then relax. Our "high performance," "perfect running," "smoother than ever before," "accelerate like a jack rabbit" engine will provide gasoline mileage beyond the very finest of technicolored dreams. At least that's what some advertisements imply.

It may be unfair to want to know exactly how good mileage makers and performance improvers really are. But fair or not—we decided to check a representative sampling. Purchases were made on the open market of a set of original equipment spark plugs, another set of eight multi-point plugs guaranteed for an unusually long time, dual breaker point kit, ignition spark booster, perforated carburetor idle jet needles, and fuel mixture vaporizer. Each was advertised as a provider of startling economy and/or fabulous performance.

The camel on which our straws were loaded was a 1955 Mercury with automatic transmission, four-barrel carburetor, and 24,000 miles on the odometer. The old breaker points were in fair shape, while eight off-brand spark plugs had suffered through 9000 miles of service. A dangerously empty

*Many sensational claims are made for devices
to produce phenomenal gasoline mileage.
If they're as good as the inventors
claim, why aren't they on our cars?
Here are some of the reasons . . .*

gas tank was filled (and kept full) with Mobilgas Special, to insure an unvarying supply of fuel for both the road and dynamometer tests.

FOR ROAD TESTS the Merc was driven 12 miles to a flat stretch of highway, by which time it was well warmed up. Each device was installed, run in for a few minutes, then its effects on idle rpm and air/fuel mixture were recorded. Acceleration tests were performed by a series of "drags" 0 to 60 in D and a second series 0 to 40 in Low.

After each device was fully tested, it was removed from the engine, which was then returned to stock condition before another device was installed. All tests were repeated, *in the same direction on the same section of highway.*

In stock condition the Merc provided nominal acceleration times and locked throttle speeds. Inasmuch as ignition and carburetion were known to be a mediocre average, our test procedure left room for the devices to do good—if they had the slightest improvement potential.

The day following road tests we drove the Merc to Monise Motors in Pasadena, Calif., where a new Clayton chassis dynamometer had just been installed and tested. At Monise, both Merc and dyno were run for 20 minutes to stabilize operating condition before any recordings were made. As during

the road tests, each device was installed on the stock engine, tested, then removed before the next item was tried.

WE FIRST TRIED a set of premium price (\$1.20 each) nationally advertised, multi-point spark plugs. Each plug has a vast number of spark points, and advertisements claim the arcing area is supposed to move around the complete circle. That this is impossible was discovered when feeler gauge measurements disclosed central electrodes so far off center that gaps varied from .018 to .045-inch on the same new plug.

Observing their operation in a pressurized plug tester verified our opinion that no matter how many gaps the plug had, it would spark only at those points nearest the center electrode. All eight plugs were tested: one fired from three points most of the time, two fired from two points, and the remainder would fire from only one point—no matter what test pressure was used.

In our car, the practical value of such plugs was demonstrated by slightly increased idling speed. But there were no important changes in acceleration times, compared to the previously tested set of factory specified spark plugs. The self-cleaning feature and the longer life attributed to such multi-point spark plugs are considered questionable because the recessed gaps are hard to scavenge, and ignition of the charge at speed may be more difficult to produce for a given gap spacing. Another point mentioned is the difficulty of cleaning lead compound from semi-enclosed spark gap plugs. Lead compounds lose electrical resistance when heated by full throttle acceleration, making a leakage path to ground.

A SET OF DUAL BREAKER points was added next. There is little controversy over the value of a dual point set, for it's usually agreed among ignition engineers that dual point ignition is capable of improving coil output. An increase in cam dwell angle, created by the overlapping action of a dual point set, causes the coil circuit to be fed with electricity for a longer period of time between spark discharges. This stuffs more electricity into the coil, resulting in a more potent spark. Their value seems unquestioned for maximum output engines.

NEXT, A "PITCHMAN'S JEWEL." Surely you have attended county fairs where the "Handy-Dandy Little Spark Coil" was being pitched for any sum from 50 cents to \$5. It's a simple device in a handsome plastic case, placed in the center socket of the distributor cap, where the coil's high tension wire is fed into it. Known to the trade as a "Spark Booster," these dandy gadgets used to do an impressive job,

particularly if the demonstration engine had plugs gapped just a little wider than usual. Spark boosters are nothing more than an inexpensive resistance unit forcing the coil to build up slightly more voltage before discharging past the spark plug gap.

Installed in our Mercury, it did practically nothing that hadn't already been accomplished when we put in a new set of plugs. In fairness to the manufacturer, it should be mentioned that 1957 Buicks use resistance type ignition wiring, and Chrysler products feature resistor spark plugs—which devices reduce the wear and tear on spark plug gaps. However, the value of ignition resistance installation is still subject to debate by automotive engineers. It is certainly beyond the scope of our test to attempt resolution of the question. Of the new cars, some ignitions use resistance and some don't. Take your pick.

AIR BLEED NEEDLES for carburetor idle mixture adjustments came next. They add air to the idle mixture—plus dirt. When initially installed they provided increased idling speed. We had to enrich the mixture to regain a really smooth idle, which adjustment no doubt merely restored the proper idle air/fuel ratio our carburetor had in the first place. Acceleration times

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custom sensation



a laboratory on wheels

NOT OFTEN DO YOU FIND a custom car that challenges the imagination of automotive enthusiasts as greatly as Jim Butler's radically restyled 1955 Studebaker coupe, our custom of the month. Butler, an instructor at El Camino College in the south part of Los Angeles, dreamed up and executed all the styling innovations himself. There is more to the car's appearance than meets the eye, for it literally is a laboratory on wheels. The mechanical gadgetry includes an electronic monitoring device, which is used to control automatic steering and the other electrical

devices on the car. The automatic steering, incidentally, really works. On a test drive with Butler, we experienced the sensation of going around a curve in the road without the driver touching the steering wheel. Although he admits its impracticality for normal everyday use, Butler is experimenting with another device which prevents the custom from running into any object ahead of the car. When you're travelling at 50 mph towards a brick wall and your car comes to a stop without your touching the brake pedal, you realize that here is a custom that is truly sensational!

story and photos by James E. Potter

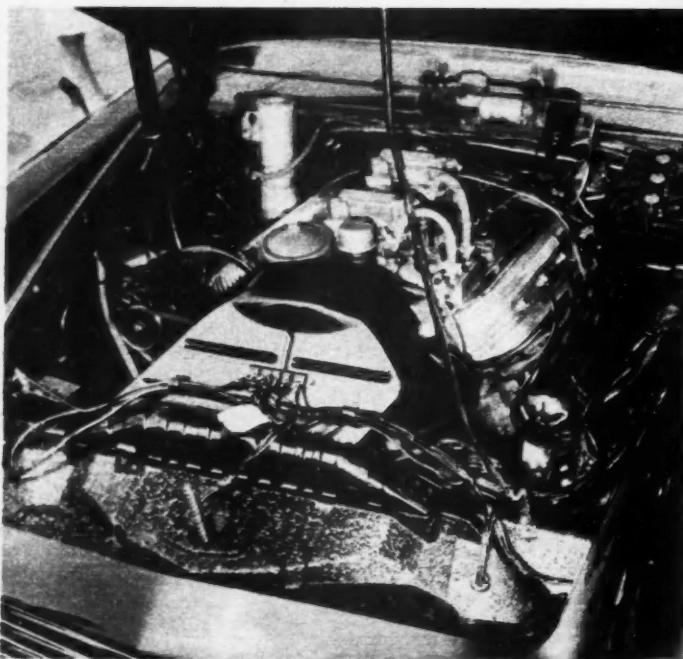




WHAT APPEARS to be a TV set nestled neatly under dash is an electronic monitor unit designed to control automatic steering and other electrical devices on car. Left knob on set controls audio signal; center, sending signal;

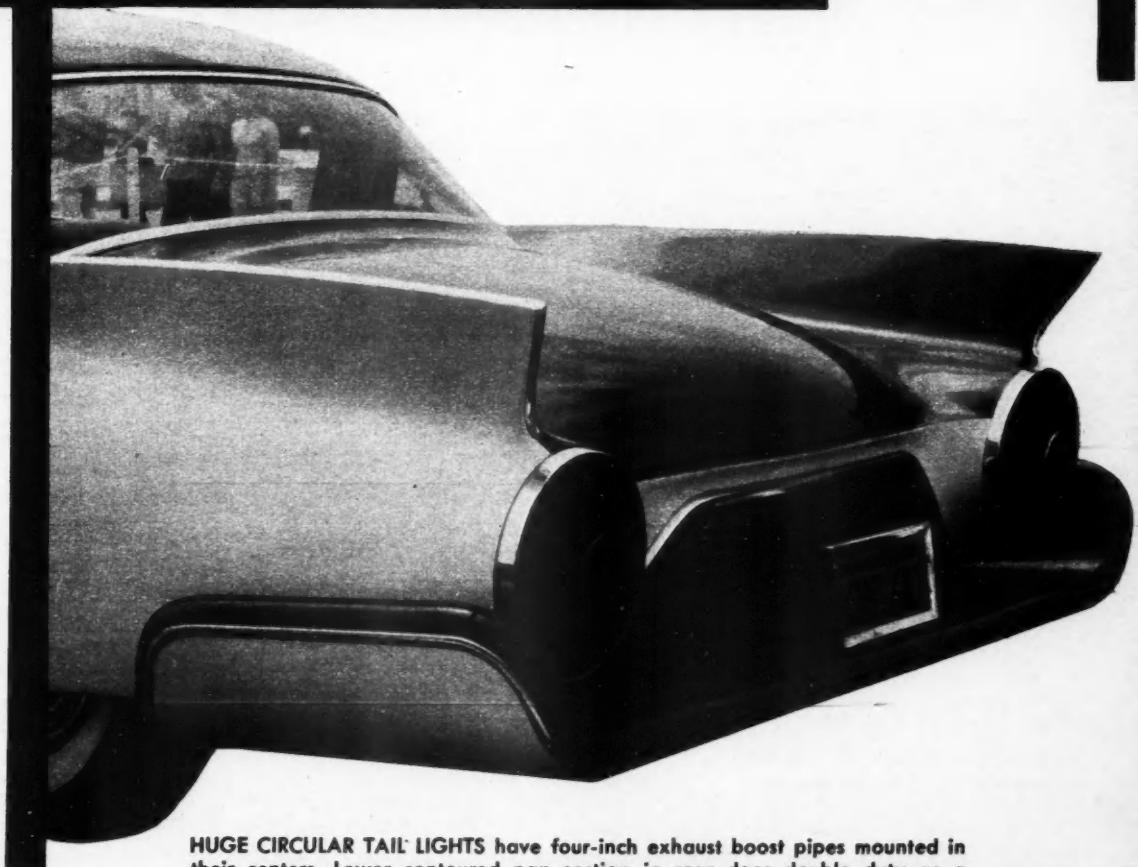
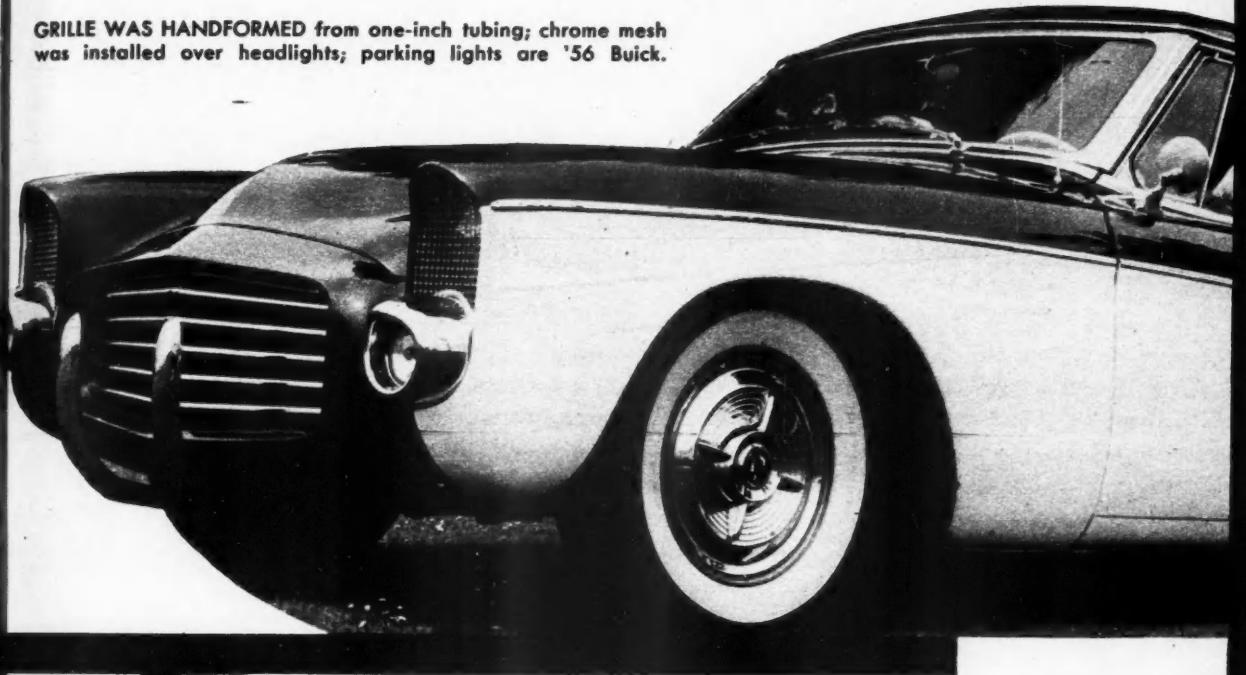
right, strength of radio signal. Screen shows blip and warning lights for power failure on any of the circuits. The RCA record player has been converted into a hi-fi system with extra speakers located in front and rear.

ENGINE FEATURES Offenhauser equipment, twin Strombergs which have metering device for special fuel, and a fuel tank for ram thrust booster system in tail pipes. All special systems were designed and built by owner.



OBSERVATION GLASS was made from a 1949 Plymouth rear window; top of car was re-arched and raised one inch in front to accommodate installation. Cost was only \$8 complete.

GRILLE WAS HANDFORMED from one-inch tubing; chrome mesh was installed over headlights; parking lights are '56 Buick.

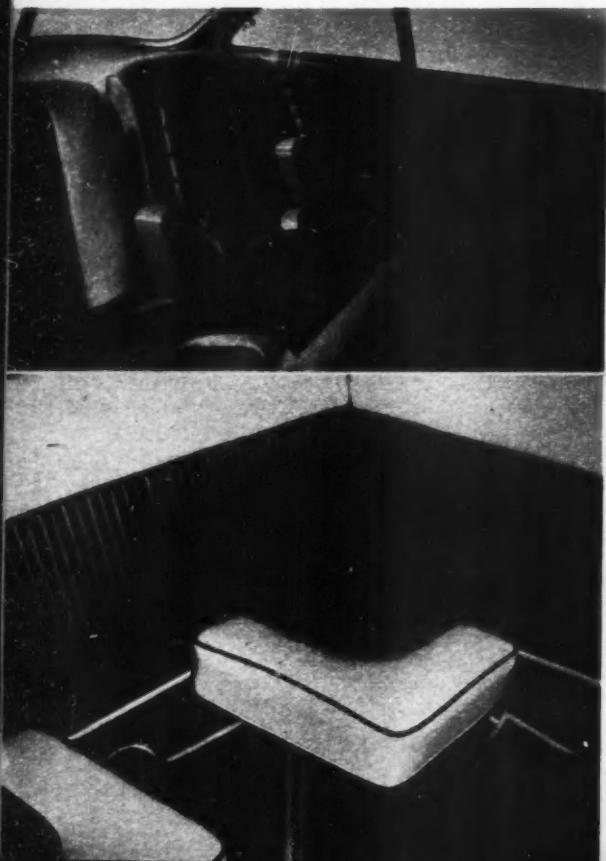
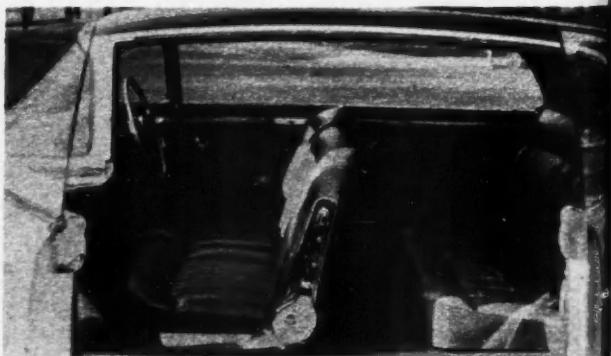


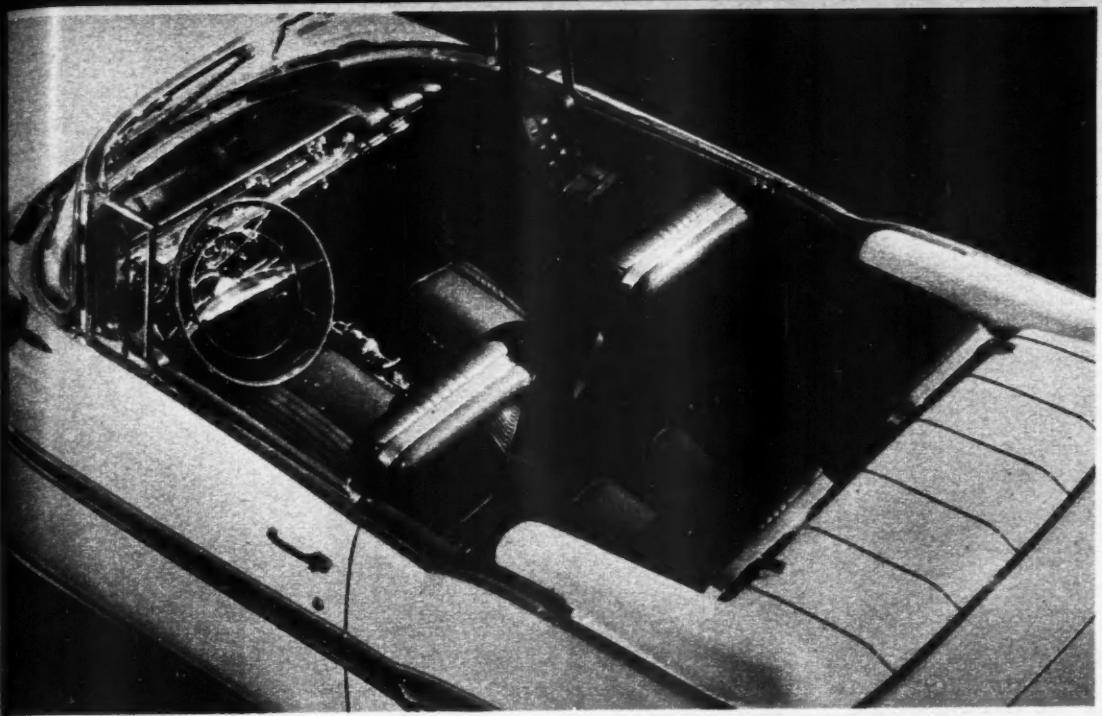
HUGE CIRCULAR TAIL LIGHTS have four-inch exhaust boost pipes mounted in their centers. Lower contoured pan section in rear does double duty as a styling gimmick and as a bumper. Built-in rear jacks aid tire changing.



custom i

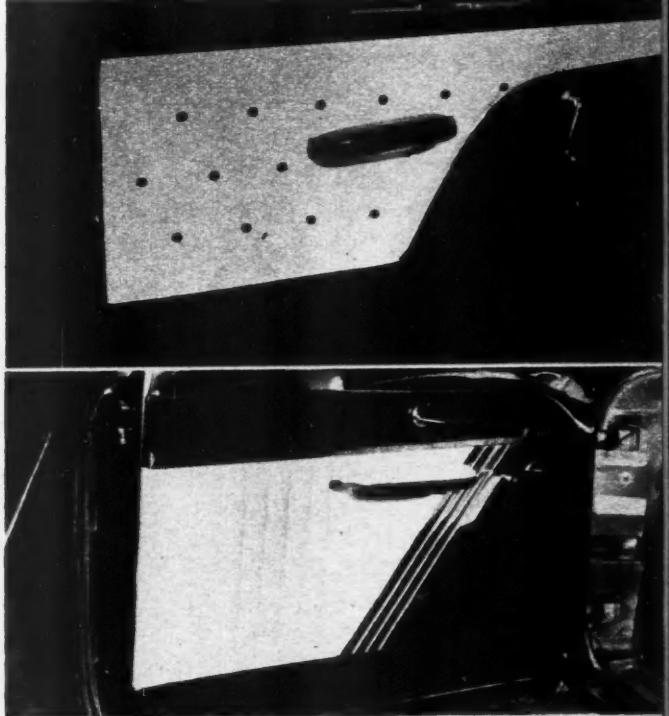
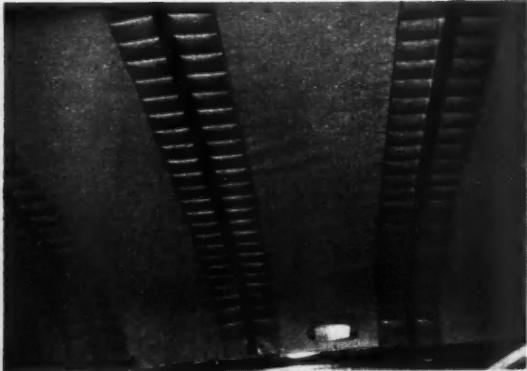
THE GARISH INTERIORS of the early years of customizing are gradually succeding to more subdued designs that, essentially, are in good styling taste. Dressing up the interior with custom built-in radio speakers, snack bars, and even an occasional TV set, continues to be in vogue. Earlier simple pleats and rolls on the seats are now being carried a step further by going into more intricate designs, two- and three-toning of the material, and continuing the patterns onto the seatbacks, side, kick panels, and even the headliner. Naugahyde is the most popular material used by the customizers, although the availability of other synthetic vinyl plastics is occasionally seen in a restyled interior. These examples of top-quality installations and designs may help you with your interior customizing project.



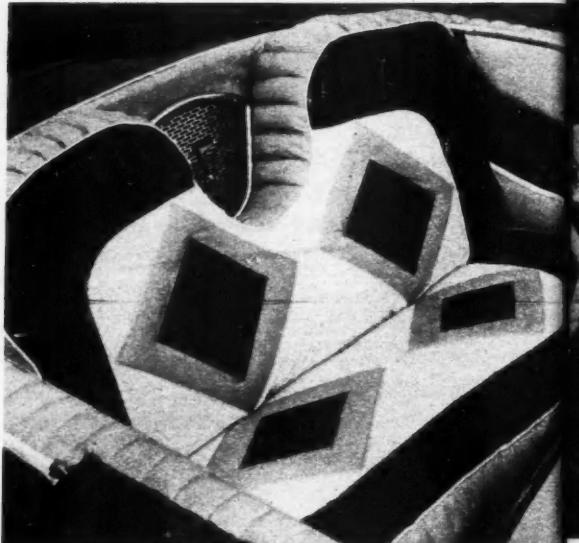
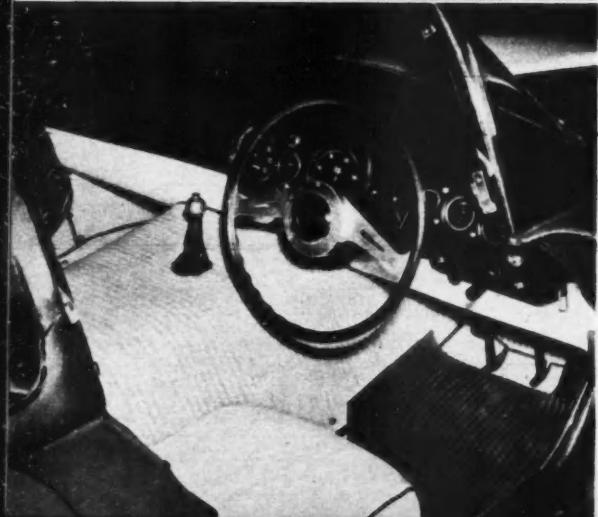
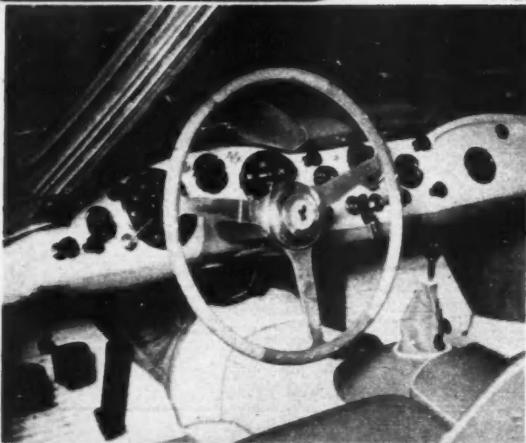


in interiors

by James E. Potter



custom

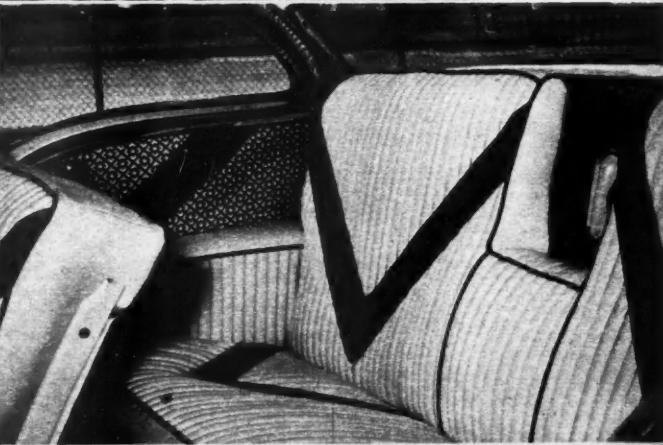
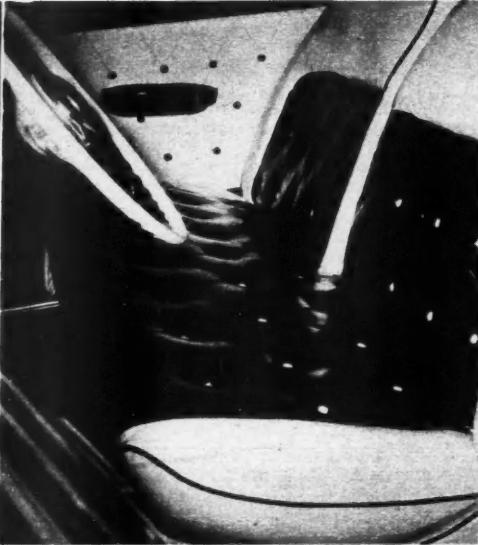


EXCELLENT TREATMENTS of the driving compartment (shown at left and below) will give you food for thought if you're considering restyling the interior of your car. Designed by such outstanding European custom car body builders as Ghia and Farina, one feature seems to be consistent in each of the foreign-built customs; they are done in tasteful luxury, with an amazing emphasis on the best possible comfort for driver and passengers. Contoured bucket seats predominate, and the upholstery installation itself is designed to conform to these contours, each complementing the other. You'll notice, also, that carpets, kick panels, and gearbox hump are covered, giving a finishing touch to interior.

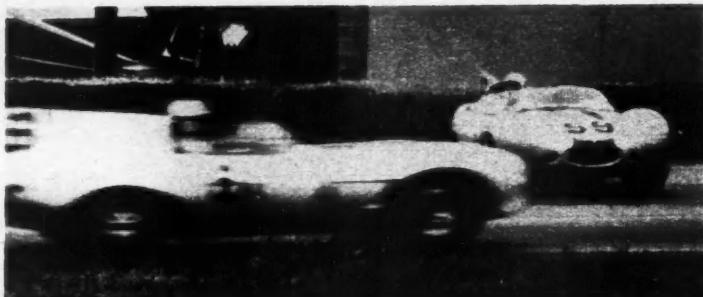


PHOTOS BY GEORGE BARRIS, JAMES E. POTTER AND JOE H. WHERRY

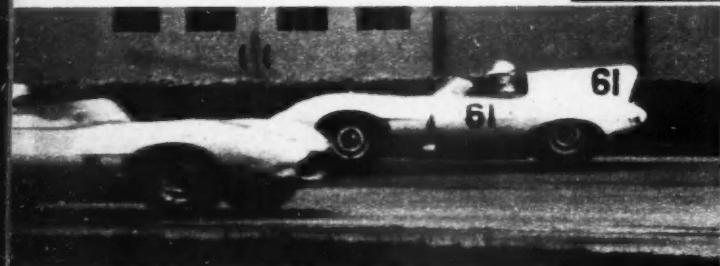
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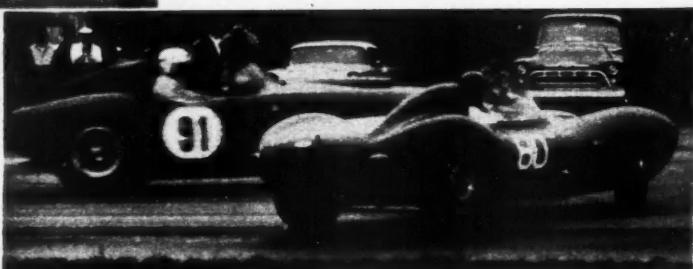
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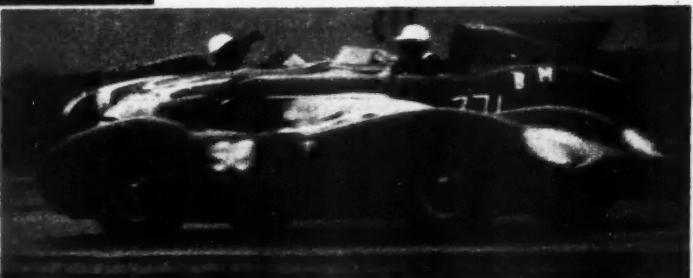
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A VERY FITTING INQUIRY — for at the recent SCCA Cumberland, Md. races a number of the drivers swapping ends must have asked this same question. We don't know if any record for spins was set at this event, but certainly the above photographs attest to the drama of watching the field zoom by — especially when you're sitting right in the middle of it!

photos by Hugh Harkins

THEY PROMISED ME 85 MPG

continued from page 50

were fairly constant and there was little change in the final air/fuel mixture. The value of such units lies mainly in their possible correction of faulty idle adjustment, which is borne out by this quotation from a current advertisement: "No help if carburetor 'perfect.'" Like many carburetor attachments, needles and bleeder valves are only valuable if basic carburetion is off balance.

MOST SURPRISING of all our tests was next: installation of dual whirly-gigs between carburetor and manifold. This is a device with fan blades to mix the vapor, a piece of window screen to do something else (?), and a reed-controlled bleeder valve to pour air into the venturis as manifold vacuum drops. It improved economy—but by leaning out the mixture to the danger point. Long distance high speed runs with an extremely lean

mixture could result in burned valves and spark plugs. Besides, devices placed in the carburetor throat reduce high speed performance by virtue of restricting the maximum of air flow.

THERE'S NEVER BEEN ANY QUESTION but that the American public likes gadgets such as shiny gas savers for the carburetor, weird attachments for the tail pipe, and spark intensifiers. But if there really were a gas saving device or chemical which could improve the mileage of a *properly adjusted* engine, rest assured it would be factory equipment. Imagine the sales lead Hudson or Packard would have if their makers could produce a large car that accelerated with the best of them while giving 85 miles to the gallon of gas!

So the next time you're concerned with gasoline mileage or economy devices, check with yourself. Is your car tuned to take advantage of modern gasoline, and do you avoid wasteful driving habits? With attention to both factors, and an honest answer to both questions, you will enjoy all the real economy and pleasure of driving provided by modern gasolines and modern engines.

**NOW! Add a custom feature
to your car at LOW COST!**



The Original CAR-Y-ALL Arm Rest—Storage Compartments—Seat Divider— Kiddie Seat... ALL IN ONE

Comfortable arm rest for front or back seat plus seat divider. MORE, it's an all-purpose storage compartment complete with Nylon Whisk Brush, more spacious than your glove compartment! And you won't have to fumble for items like tissues, tobacco, maps, tools, camera, sandwiches etc.—they'll be right there at your fingertips! Quality crafted, saddle stitched luggage type construction, with piano hinged lid. Available in 6 colors: Red, Blue, Tan, Green, Green, or Black. Adjustable wire frame holds CAR-Y-ALL securely in place. Excellent item for gift giving too!

\$7.95
Post. Paid Dealer inquiries invited

NU-ITEMS CORP.

146-45 Horace Harding Expressway, Flushing 57, N.Y.



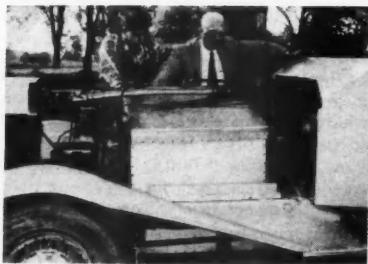
New Detrick Steam Engine Unit May Be Offered to Public

AT THE THIRD ANNUAL Steam Car Meet, August 16-18, at Kent University, Kent, Ohio, almost 100 steam powered cars will be puffing in all their glory. Among those attending will be Forrest R. Detrick of Worthington, Ohio, who has fostered the building of a new steam car model—the Detrick S-101—in collaboration with engineer-designer Lee Gaeke and builder William H. Mehrling.

As opposed to the Stanley Steamer's slide valve design, the Detrick engine—two cylinders with four-inch bore and five-inch stroke—features a four-valve poppet arrangement of the uniflow type. The steam enters on one side of the cylinder and passes out, in the same direction, through the other. This offers a definite advantage over a slide valve engine where one port serves as both intake and exhaust, resulting in heat loss inefficiency.

The Detrick Steamer utilizes a modified '53 Ford F-100 pickup chassis whose wheelbase has been stretched to 127 inches. The long hood—covering everything except the engine

—was intentionally designed to look like that of the pre-World War I Stanleys. The functional grille is actually a heat exchanger, with the hollow grille members lowering the temperature of the water taken from the supply tank before it is injected into the atmospheric condenser.



Detrick (r.), engineer Gaeke study steamer.

As pictured in not quite finished form (a Fiberglas after body is planned), the car weighs 3400 pounds including 20 gallons of No. 1 fuel oil (enough for 150 miles) and 30 gallons of water (sufficient for 200 miles). Present speed of 60 mph will be increased by faster gearing.

Detrick intends to make complete boiler-condenser-burner-engine units available on order. As yet no price has been set, but by late fall he hopes to be turning out units at the rate of 200 per year. —Joe H. Wherry



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Monza



PUBLIFOTO

Bryan wins at faster pace than at Indy—

DESPITE GLOOMY PREDICTIONS of disaster, and the abstention of the European Association of Professional Drivers, the Monza 500-Mile race was run off without serious incident and proved less of an ordeal for the drivers than had been expected. The American contingent was enthusiastic. They justified their faith in the race by collecting all the major cash awards—and all but one of the lap leadership prizes—in a race which was faster than Indianapolis, and run in hotter weather. But their cars took a severe pounding from the bumps of the banked corners so that only three of the nine American cars were running at the finish. This was despite much high-speed work during the two one-hour rest periods repairing split frames, fuel tanks and radiators, changing dampers and attending to ailing engines.

The only European representatives, the Jaguar team of the Ecurie Ecosse, gave a fine display of high-speed reliability, bringing all their three cars to the finish, without any repairs during the race; they collected around \$8500 for very sporting effort in pitting sports two-seaters, with dynamos and lights, against the American single-seaters with much larger and more powerful engines, although they had only a few hours to check the cars over after their triumph at Le Mans the previous weekend (see page 62).

Jimmy Bryan, in the Dean Van Lines Special, won the race at 160.315 mph, two laps ahead of Troy Ruttman in the John Zink Special and seven laps ahead of Johnnie Parsons in the Agajanian Special. Next came the three Jaguars driven by Fairman, Lawrence and Sanderson. These were the only finishers out of 12 starters.

This first confrontation of American and European machines was expected to produce many new problems, and for safety's sake, the race was divided into three sections of 63 laps, with an hour for repairs and adjustments between each.

During the qualifying period, Bettenhausen on the supercharged Novi lapped the 2.64-mile track in 53.7 secs, at a speed of 177.047 mph. This was far above the 20-year-old record for a lap in a European race set up by Lang on a Mercedes at the Avus, Berlin at 171.5 mph in 1937. Andy Linden on the McNamara Special and Pat O'Connor on the Sumar also got around in under 55 secs.

This raised some hopes that Lang's lap speed, and his record for a European race of 163.2 mph would be beaten, but the Firestone tire technicians advising the Americans, and Dunlop advising Jaguar, had to point out that such speeds were increasing the rate of wear and would make tire changes necessary during heats. The weight of the car is in effect doubled every 30 seconds as it flicks over onto the banking, and the weather was very hot on race day: 104°F in the sun and 124°F on the concrete surface.

The Jaguars had insufficient body clearance to permit an increase of tire or wheel size, which would have helped to counteract the effects of centrifugal force. While the Americans were using 8.00-18 Firestones at the rear, specially designed for the Monza track, the Jaguars were fitted with racing tires with thinner treads to reduce the risk of the treads being thrown off. They were not planning to lap at under a minute, so they had to match endurance against speed. Lawrence was driving the 3.8-liter fuel injection car which had won at Le Mans six days previously, Fairman had the 3.4-liter car which came second, and Sanderson had another 3.4-liter D-type. Paul Russo's Novi broke its clutch after qualifying, and Behra's Maserati was withdrawn after qualifying, as there was not time to finish all the work on steering, suspension and transmission, to adapt it to the American wheels and tires. This left nine American starters: Tony Bettenhausen (Novi), Pat O'Connor (Sumar), Andy Linden (McNamara), Bob Veith (Estes Special), Eddie Sachs (Robbins

Special), Jimmy Bryan (Dean Van Lines Special), Ray Crawford (Mirror Glaze Special), Johnnie Parsons (Agajanian Special), Troy Ruttman (Zink Special), and the Jags.

The start was in Indianapolis style each time, with the cars rolling round for a lap behind a pace car. At the end of the first lap, it was Jack Fairman who came by well in the lead with the Jaguar, making sure of at least one prize for race leader before his tires got hot. Then the American cars engulfed him. Bettenhausen fought with Sachs, O'Connor and Bryan until stops at the pits for throttle adjustment, tires and plugs dropped him out of the picture. O'Connor and Bryan then fought it out, with Linden in third place and Sachs dropping to fourth. Bryan won the first section at an average speed of 159.63 mph, with O'Connor second, Linden third.

During the rest period, the McNamara had dampers changed and a radiator leak soldered, the Robbins Special got new dampers (the rear of the body had been hitting the track), the Sumar had a gear change and new bolts in the chassis, the Mirror Glaze had repairs to a split tank and cracked frame, the Estes crew changed dampers and welded an exhaust bracket, and the Novi crew decided not to restart, after struggling with tank leakages.

On the second 63-lap section, speeds rose. O'Connor took the lead from Sachs and Bryan, but after 16 laps he was out with a split tank. Meanwhile, Veith had lived through some exciting moments when his steering column came adrift, but the curve of the banking held his car on course and he was able to stop without much trouble. Said Veith gratefully afterwards, "In all my years of racing I have never raced on such a safe speedway. If this had happened anywhere else I should either have been killed on the spot, or have gone over the fence, but the banking kept the car on the line and I was able to stop in the pit area."

500-MILE RACE CONFOUNDS CRITICS



with no serious accidents

by Gordon Wilkins, Overseas Correspondent

Sachs held the lead until the 44th lap, when he retired with engine trouble, leaving Bryan in the lead, pursued by Ruttman and Parsons. Linden had already disappeared with a split tank, and at the end there were only four cars left, one of which, the Mirror Glaze, had been ominously trailing a smoke cloud for many laps. Bryan again finished first, this time at an average speed of 160.194 mph, with Ruttman and Parsons chasing him home.

During the second repair session, mechanics slaved to fit new studs to the camshaft cover of the Mirror Glaze, and when the final section started, they were still struggling to replace the exhaust camshaft. The car restarted seven laps behind the others, but retired trailing oil after one lap. O'Connor led, but at eight laps retired with a split fuel tank. There were now only three American cars left, driven by Ruttman, Bryan and Parsons, with Fairman on the leading Jaguar ready to step into the big money at the slightest faltering by the surviving Americans. Ruttman set the pace, but could never gain more than about 32 seconds on Bryan. Though he won the third section at 158.598 mph, ahead of Bryan and Parsons, his accumulative time was higher than Bryan's. This placed the Dean Van Lines in first place as the overall winner. Bryan had finished 189 laps in 3 hrs. 7 mins. 5.9 secs. or an average speed of 160.315 mph. Ruttman (Zink Special) was second with 187 laps, Parsons (Agajanian Special) was third with 182 laps. Fairman, Lawrence, and Sanderson (Jaguars) completed 177, 171, and 159 laps, respectively. The fastest lap of 54.1 seconds (175.739 mph) was turned by Bryan.

The American contingent, with their brilliant striped shirts and cowboy hats, brought a lot of color to Monza, but the Europeans were much more impressed with their seriousness, and the excellent preparation of their cars. It is easy to argue that these American monsters, with their offset engines, two-speed

gearboxes and old-fashioned rigid-axle suspension systems designed to take left-hand corners only, are the antithesis of technical progress; and that the drivers' main attributes appear to be courage, physical endurance, and a strong right foot to keep the throttle open—but they rode the bumps of the banking remarkably well. Actually, more driving skill is needed at Indianapolis where the cars are drifting the almost unbanked turns at 120-130 mph.

There must be many Europeans, who having seen the race, will wonder whether it was not condemned too hastily. The brave performance of the Jaguars, without any special preparation, showed that there are a number of European cars which, properly prepared, could have put up a strong challenge to the Americans. The modern road racing car swerving and drifting at high speed through the varied hazards of a road circuit represents a much higher technical achievement, and demands an infinitely higher level of driving skill. These are facts well known to drivers, engineers and the press, but relatively few of the spectators appreciate them at first hand.

Motor racing is a commercial spectacle. The great stands at Monza as elsewhere, are on the straight, and what the spectator sees is a lot of cars going past quickly in a straight line. What he saw at the Monza 500 was cars going past more quickly, at more frequent intervals. To see the great American machines thundering past reminded one irresistibly of the great days of the Outer Circuit at Brooklands. Owing to the lack of any Italian challenge, the crowd was small—about 20,000. Ing. Bacciagaluppi of the organizing committee told me the race would probably show a loss of nearly \$85,000, but every effort will be made to organize it again next year on a broader basis. Certainly the Americans will profit from their experience to produce cars which will last the distance and tires

which will permit still higher speeds. All cars next year, for example, will probably use steel tanks (like the finishers) in place of aluminum. If present engine sizes are maintained (256 cu. in. unblown and 151 cu. in. supercharged) they anticipate lap speeds of over 180 mph. There seems little possibility of changing engine sizes in the immediate future, as the car owners have so much money locked up in them.

Neubauer, Racing Director of Mercedes-Benz, who was an interested spectator, told me, "Here you can prepare for Indianapolis without having to go there." The race has demonstrated what those of us who have driven there for hours on end in record attempts already know—that the Monza speed circuit is a valuable testing ground which will quickly reveal the weak points in chassis or bodywork. Duane Carter said that in the future any European driver wishing to compete at Indianapolis will be required to produce evidence of having qualified at Monza, in addition to the usual qualification laps at Indianapolis.

The plea that there was insufficient time for the European constructors to prepare cars for this year's race has been rejected by Giovanni Canestrini, leading Italian journalist and member of the organizing committee. He points out that proposals for a common agreement on engine size between Europe and America have been before the FIA since 1951. The regulations for this race were known to interested parties in October last. Moreover, Italian constructors already have experience of building cars for Indianapolis, and have firsthand experience of the special problems posed by the Monza high-speed circuit, which the Americans lacked. In some quarters it is even being suggested that there has been defeatism in Europe. The Monza event is certainly going to inject a new element into the anxious discussions now so prevalent on the future of motor racing.

THE 24-HOUR



ANNUAL AUTOMOBILE REVIEW

STRUGGLE



WEITMANN

Jaguars 1st, 2nd, 3rd, 4th, 6th at Le Mans. Lotus 1st and 2nd on Index.

LE MANS 1957, 25th event of the series, was a triumph without precedent for the British motor industry. In a race where 33 out of the 54 starters failed to finish, all five privately-owned and entered Jaguars finished, taking first, second, third, fourth and sixth places. The first four broke the previous race record, with the winning team of Flockhart-Bueb averaging 113.84 mph for 2732.4 miles. The long-standing French monopoly on the Index of Performance Handicap was broken by Lotus with Allison-Hall taking first in a 744cc Lotus and Frazer-Chamberlain taking second (ninth overall) in a 1098cc job. These two also took the 750 and 1100 class honors, Jaguar (Flockhart-Bueb) won the Over 3-Liter Class, and a privately owned Aston Martin DB3-S (Colas-Kerguen) took the 3-Liter Class.

As the starter raised his flag at 4 P.M. under a threatening sky, there was the usual hush of expectancy, and many wondered uneasily what the first few laps would bring. Fangio and Hawthorn had both lapped at over 126 mph in practice in the 400-hp V8 Maserati and the four-camshaft four-liter Ferrari, and had exceeded 180 mph on the straight. Then, ominously, Fangio, who takes no avoidable risks, decided not to race.

The flag dropped, the scamper of feet broke the silence, then in a pulsating crashing crescendo of sound, the cars were away, weaving for position and leaving long black tire marks behind them.

Collins' Ferrari led for just one lap, retired with a broken piston and Hawthorn took over the lead for Ferrari, breaking his own lap record as he was pursued by Moss in the Maserati coupe. Behra in the open Maserati moved up methodically, and eventually set a new course record to take second place. Hawthorn responded, but had to stop to change a wheel. Behra took the lead with Moss second, but the Maserati ascendancy was short-lived. Moss, who had been trailing smoke between pit stops, had to retire with transmission failure, and Behra, having refueled, handed over to Simon, who immediately came to rest at Mulsanne with a parted U-joint. So the Maserati challenge ended, but the Ferraris too were soon faltering.

Meanwhile the unprecedented speed of the 750cc Lotus, with a specially lined-down

short-stroke version of the Climax engine was creating consternation among its small-car rivals. Touching 112 mph on the straight, Allison and Hall were averaging 92 mph, leaving the DBs, Monopoles, Osca, and Stanguellini laps behind.

The massive Italian effort was now practically over, and at midnight it was Jaguar first, third, and fifth. In second place, behind the Flockhart-Bueb Jaguar was the Brooks Aston-Martin, still challenging strongly, then the second Scottish 3.4 Jaguar (Sanderson-Lawrence), the Gendebien-Trintignant three-liter Ferrari, and the Belgian 3.4 Jaguar (Rousselle-Frere).

The Gendebien-Trintignant Ferrari had retired with a broken piston, leaving Jaguars in the first four places. Then, as daylight came the mist got worse and spread over a large part of the circuit, but the leading Jaguar kept on lapping at around 4m 14s. The mists rolled away to start a bright sunny day and soon after 7 A.M. the fine Belgian challenge was checked when Rousselle stopped near Mulsanne. It was about three-quarters of an hour before he traced and rectified the trouble—closed-up ignition points. This dropped them from second to fifth place, but they soon repassed the Ferrari to take fourth.

McKay Frazer and Chamberlain on the Lotus were well ahead in the 1100cc class, but they could not relax, for their second position on Index was coveted by Storez and Crawford, whose Porsche was sixth in the general classification, first in the 1500 class, and only nine points behind the Lotus on handicap. Then with only an hour to go, fate struck again. The Porsche came creeping past White House and parked at the roadside. It eventually crossed the line under its own power as the finishing flag waved, but was excluded, as the regulations stipulate the last lap must be completed within 30 minutes. So the Hamilton-Gregory Jaguar moved up into sixth place, and the American-entered Porsche of Hugus and de Beaufort became leader of the 1.5-Liter Class. Colas and Kerguen brought their French-entered Aston-Martin into 11th place to win the Three-Liter Class, and the Harris-Bianchi Ferrari won the Two-Liter Class, ahead of the Rudd-Bolton A.C.-Bristol.

The fact that the race passed off this year

without serious incident does not alter the fact that sports car racing has now reached a critical stage of its evolution. The failure of the CSI to take any adequate directive action has resulted in the construction of so-called sports cars that are far faster than Grand Prix single seaters and useless outside the race track. Last year the Le Mans organizers tried to initiate reform by restricting engines of prototypes to 2500cc and imposing a limit on fuel consumption. The restriction received no support and the whole effort resulted in the race being excluded from the 1956 World Championship.

Jaguar had to make some concession to the unchecked advance in engine size by providing the Ecurie Ecosse with a 3.8-liter engine for the winning car. It was inspired by the bored-out engine used by Briggs Cunningham, but as this meant removing too much metal, a new block casting has been evolved.

Reasons for the Jaguar success were summed up by Lofty England, racing and service director, who said, "We come to Le Mans to race, not to test prototypes."

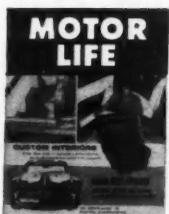
The odd fact remains that the Italian machines, which crack up so quickly at Le Mans, manage to win the Mille Miglia, while the Ecurie Ecosse Jaguar in that event retired before half distance with fractured body-work. It has also been shown that the Aston Martins are quicker than the Jaguars on a tortuous course like the Nurburgring. The answer seems to be that the Le Mans course itself has been excessively refined to the point where it is a tremendous test of engines, transmissions and brakes, but makes little demand on chassis strength or road-holding. The Italians always try to force the pace, starting the race as if it were a Grand Prix of three hours duration. Lacking disc brakes, they make excessive demands on their transmissions during the deceleration from maximum speed to 30 mph, which takes place once every four minutes at Mulsanne.

The current trend of opinion suggests that just as we have seen the last of the Mille Miglia under its old form, so we have seen the last of Le Mans under the present regulations. Action is needed if the race is to be preserved as a great annual classic.

—Gordon Wilkins



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From Bennett-Chaiken Survey, 1956.

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terior chamber. It can cause flooding, boiling, air lock or external leaking. Replace the gaskets and check for a casting imperfection before reassembly.

Q. CLASSIC BUICKS? Is the 1938 Buick Roadmaster convertible sedan a classic? Is a 1938 Bohman & Schwartz-built Buick sedan a classic? Fred Jorgensen, Pasadena, Calif.

A. Definitely the stock body convertible sedan is a beautiful car, but non-classic. We would say that the Bohman & Schwartz-built job was a classic, but there will probably be many who disagree with us. Incidentally, we can find no record of a Bohman & Schwartz Buick sedan built in 1938. We understand that one or two limousines were built on the '38 chassis.

Q. ANY CONNECTIONS? Was there any connection between the Continental manufactured around 1930 and the Continental as we know it today? John Frascatti, Youngstown, Ohio.

A. The Continental Automobile Co. (Detroit, Mich.) built four- and six-cylinder cars in 1933 and 1934. There was no connection between the 1933 Continental line and either the pre-war or the post-war Lincoln Continentals.

Q. CHROME-PLATING. My car is equipped with 17-inch wire wheels. They were originally chrome plated but are now rust pocked. Local mechanics tell me they cannot replate because they cannot be taken apart for plating. Do you know of any outfit that can chrome plate an entire wheel? Gene Steele, Hackensack, N.J.

A. Your local advisors are incorrect. All chrome wheels must be chromed before they are assembled. There are very few wire wheels that cannot be taken apart. Some can be disassembled much easier than others. It all depends on whether the spokes are threaded or whether the ends are flattened and welded to the rim and hub. In all cases manufacturers chromed the individual parts prior to assembly. If you attempt to chrome plate an assembled wire wheel the chrome will not "take" where the spokes enter the hub and rim. In addition, the plater would have a momentous task in buffing the metal after it was plated.

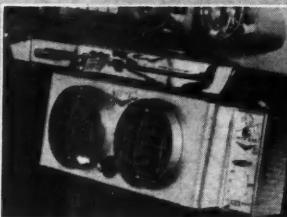
After plating they must be reassembled by competent machinists and carefully trued so that they are round and do not "run" off center. Local Los Angeles outfits charge approximately \$98 per wheel for disassembly, plating, reassembly and truing. Unless you are restoring to mint condition, you will probably be better off to sandblast, prime and repaint.

This new department is open to all types of questions from our readers. We welcome not only technical questions, but queries on new cars, old cars, classics, performance, and what-have-you? It will be impossible to answer any letters personally; we will answer as many questions as possible only in this column.

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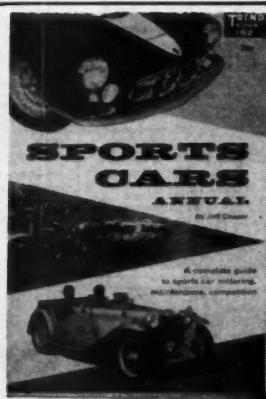
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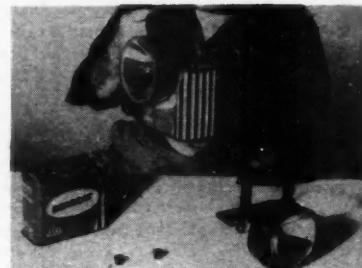
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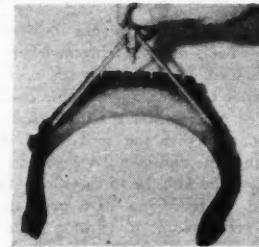
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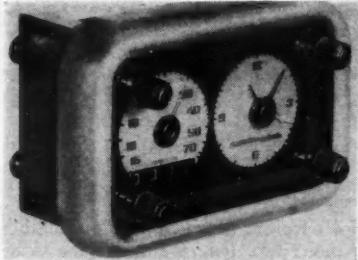
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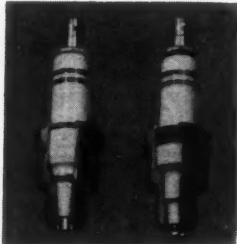
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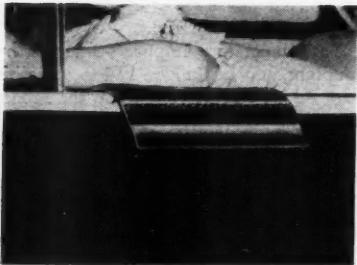
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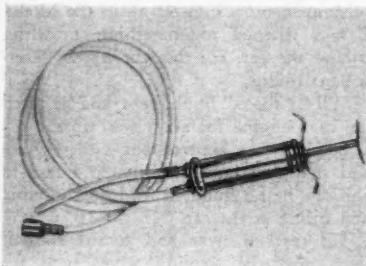
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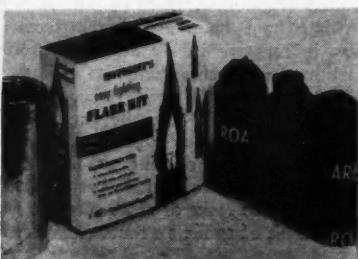
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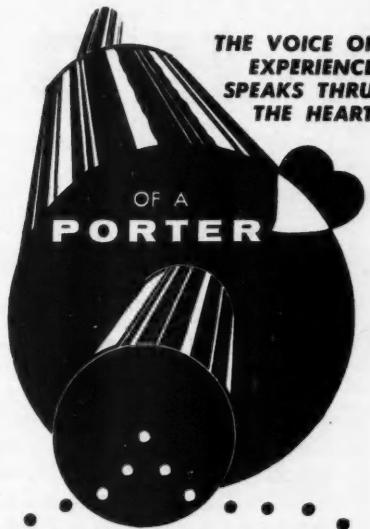
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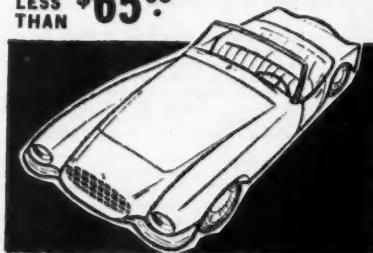
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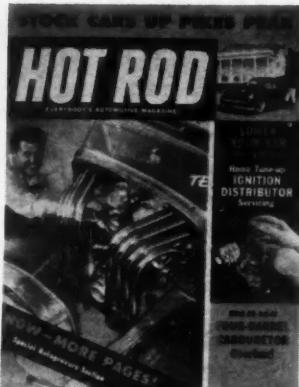
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Model T To MONGOLIA

continued from page 27

closer look at the car. In the hot sunshine it didn't take long for the engine to dry out, but it still was too damp to run efficiently. LeMunyon hired two ponies and their drivers to provide the go-power for the car until he got the engine running again.

The Chinese stupidly forgot to water their animals at the river, and in the next day they drank up all that LeMunyon had on hand. But toward evening they came to a well, and again LeMunyon renewed his supply, drawing it from a well in an untanned bullock hide and laboriously pouring it into bottles and cans. They were miles from any sign of civilization, and they camped for the night.

The temperature dropped 50 degrees by midnight, and LeMunyon had to leave his cramped car-seat bed and drain the Model T to keep the radiator and pipes from freezing.

Rising at dawn, he dared to start the car again. It coughed and kicked over, and he soon left the Mongolians and their frisky ponies behind him.

ON THE SEVENTH NIGHT in the desert, LeMunyon drew himself up in the Model T and listened to something prowling around the car. He thought it was Mongolian bandits.

"I'll fix them," he thought, and he raced the car's engine for all it was worth.

Suddenly the air was rent with yowling and snapping jaws. He lighted a lantern and saw half a hundred wild dogs circling and biting at the car.

He reached over and tooted the air horn near the steering wheel, and the fearsome squeal frightened the dogs off. But not too far. They stayed around the Model T until daylight, barking and keeping LeMunyon awake.

Pangkaing was the first telegraph station on the Gobi, traveling from Tientsin to Urga, and Udde was the second station. He pulled out of Pangkaing, and now he was 328 miles out of Kalgan, approaching Udde.

LeMunyon had picked up the 10 spare gallons of gasoline, which he realized was an important item. He contemplated a way to conserve it. He disconnected the car's muffler, because there was no cutout. This, he conceived, made it possible to save fuel and still keep the engine cool.

Entering the home stretch, LeMunyon picked his road, steering the Model T across the sun-caked flats rather than risk the knife-like rocks of short cuts. He met quite a bit of traffic en route—camel and

pony caravans—and if stampeding animal trains were criteria, the Model T was a fair sensation on the Gobi Desert.

Expecting smothering crowds when he finally arrived at Urga, LeMunyon wired the car so that when the engine was running the magneto would knock anyone who touched the car flat on his back pockets. The electrical shock system worked well on the bandits who surrounded him on the outskirts of Sume, his next important stop. They thought the car was alive, and the shock was its bite.

Now LeMunyon was in the final leg of the run. He was about to set a record in automotive history that even today remains soundly intact. Although he actually was the third man to cross the Gobi Desert in a motorized vehicle, his trip was by far the most stupendous.

Before he reached Urga, LeMunyon ran smack into a powerful headwind, forcing him to shift down to low gear. He finally spotted the Russian Bridge over the Tola River, crossed it, and entered the forbidden city of Urga.

Reaching the Mai-Mai-Chen, the business section of Urga, he stopped and inspected the car. The Model T was in fine shape, and he gave it—much to the horror of the onlooking Mongolians—a bath.

The word reached Tasha Lama that his car had arrived. A messenger was dispatched for LeMunyon to bring the Model T to him and get the 2500 taels of silver. LeMunyon knew better than to delay.

Bogdo was the proudest god in Mongolia, beaming like a child with a new pogo stick. He plopped the bag of silver into LeMunyon's hands and turned to examine the Model T. LeMunyon stuck around to give him a few driving lessons.

After several days of practice, the lama became an expert driver. He made his own traffic laws, pointing one particularly at the masses that called for them to remain out of the path of his automobile. He sent a caravan off to Tientsin the day the car arrived for as much gasoline as it could bring back to Urga.

THE DAY FINALLY DAWNED when LeMunyon announced that he had to return to Tientsin to his business, and the lama threw him a farewell luncheon of dried fishheads and rice. He gave LeMunyon a bolt of imperial yellow brocaded silk as a going-away gift.

LeMunyon had the blessing of the Tasha Lama, and so he didn't fear the loss of his taels of silver to bandits. He bade good-bye to the lama, who saw him board a Russian *tarantas*, a yak-drawn cart, for Kiachta. At Kiachta, LeMunyon bought passage on a steamer and later transferred to the Trans-Siberian Railway to get back to Tientsin. He never saw that Model T again, or the Living Buddha, either, but word reached him four months later that the car was still being driven.

Not by Tasha Lama, but by his lanky girlfriend.

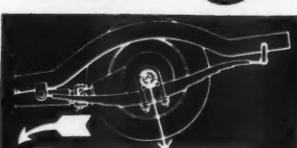
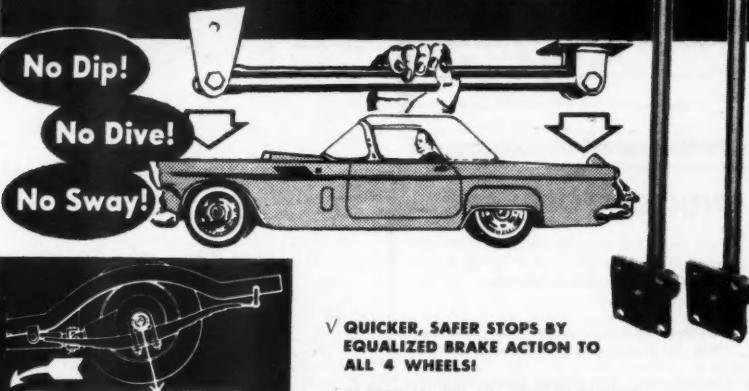
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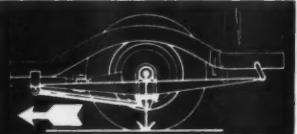
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'37 CORD 810 sed. Engine completely oiled. Re-chromed; practically new tires; interior very good. Priced to sell, \$900. W. E. Deacon, 1 Speedway Circle, Bedford, Ind. Phone 7551 or 5416.

'31 STUZ conv. cpe. Like-new top; good paint. Dual ignition, fine transmission & clutch, booster brakes. Best offer over \$950. Send 25¢ for phone & details. W. B. Mollard, Westfield, N.Y.

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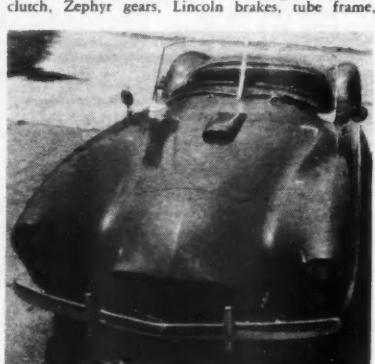
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'41 LINCOLN CONTINENTAL cabriolet, with '52 Ford V8 engine, new brakes, pins. Black, with white top. Good cond. & appearance; drivable anywhere. \$500. B. Bloom, 6202 Bannockburn Dr., Bethesda 14, Md.

'37 PACKARD 120 conv. sed. with sidemounts. Drives anywhere. \$350 or best offer. Also complete '28 Franklin sed. for parts—\$100. Ken Hill, Box 217, West Sand Lake, N.Y.

'39 FORD conv. sed. R & h, turn signals. No rust; drives anywhere. \$350 or best offer. Also complete '32 Franklin Olympic sed. for parts—\$100. Ken Hill, Box 217, West Sand Lake, N.Y.

'29 MARMON Roosevelt 8-6-1, sed. No rust or dents, uph., always covered. 6 wire wheels, side-mounts, quick-change hubs, dual cowl vents. \$300 or best offer. Ken Hill, Box 217, West Sand Lake, N.Y.

'15 BUICK 4-cyl., Model C-37 touring car. Unrestored, but in good running cond.; no rust. New Firestone tires. This is the "Big" Buick. \$650. Larry Parish, Rt. 2, Gettysburg, Pa.

WRECKING: '56 JAGUAR Mark VII. 2900 mi. on engine with B-W transmission. All parts for sale. Also '52 straight drive Mark VII. Both cars hit front. H. D. Hartshorn, 117 Ponce De Leon Ave., Atlanta, Ga.

'36 HORCH 5-pass., 3-position conv. Black, with nearly new tires. Can be driven anywhere. H. D. Hartshorn, 117 Ponce De Leon Ave., Atlanta, Ga.

'28 CHEVROLET town sed. Rebuilt engine; new tires. \$285 or best offer takes it. Robert Gale Wepfer, 2911 W. Franklin, Evansville, Ind.

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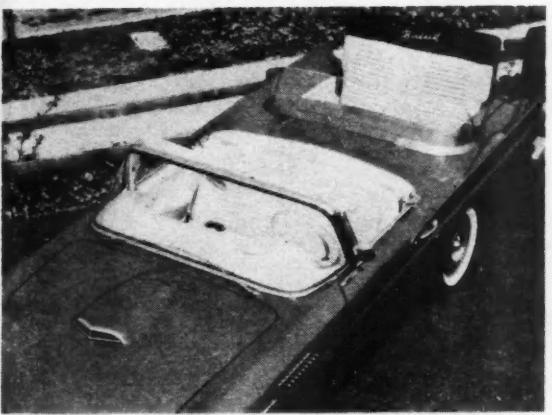
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THUNDERBIRD CONVERSIONS

Two new T-Bird conversions shown here are "Town Car" and "Birdnest" kits. "Town Car" allows owners to "carry the hardtop on rear deck . . . and move it over driver's head in less than 15 seconds in event of rain . . ."



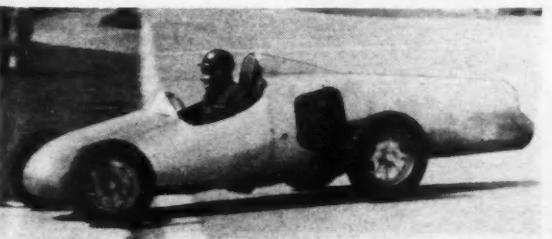
"Birdnest" adds a rumble seat in place of trunk. "Town Car" kit consists of tie-down straps and use of standard toggle bolts. It's said that even at high speeds, slope of windshield carries airstream up and over top. Sold by Sanco, Inc. (125 Ivy St., N.E., Atlanta 3, Ga.) and by Ford dealers at \$89.50. "Birdnest"



replaces original trunk deck, is of pressed body steel, comes with seats and side panels in Naugahyde. Seats two adults, more children, sells for \$239 through Birdnest (1130 No. Hollywood Way, Burbank, Calif.).

120-MPH DRAINPIPE

Jim Meikle's single-seater Formula 3 Cooper recently sped around Britain's



Goodwood racing circuit up to 120 mph, powered by a jet engine with no moving parts. Gordon Wilkins describes the engine as "a device looking like a drainpipe curved into a big U-tube. A break in the upper arm reveals an intermediate intake of reduced diameter, leading to the combustion chamber in the curve of the U. Main jet outlet is from lower end of pipe." It's a pulse jet, or self-charging, self-igniting reactor. It's started by forcing compressed air through and injecting fuel fired by a spark plug. Expanded gas rushes out the jet pipe, creating a sudden drop in pressure and temperature, drawing in a fresh charge. Power unit weighs 55 lbs, cannot now be used in competition. Car has two controls: lever to regulate fuel supply, brake pedal. Fuel is commercial grade supplied under pressure. Acceleration is good and can improve by making car lighter.

FANGIO WINS (AGAIN!)

With monotonous regularity, "El Chueco" sets out to win whatever race he cares to enter. As overseas correspondent Gunther Molter says in his report of GP of France, "Grands Prix are now more a demonstration of his (Fangio's) great driving skill than a real race with strong competition." However, he also states that spectating Tony Bettenhausen "wasn't impressed with the race and would like to come back next year to beat the boys in their own garden." Race this year took place at Rouen-Les Essarts circuit instead of at Reims. Included were several fast and slow turns, long straights, and one downhill-and-uphill hairpin. Molter says, "Not an easy circuit at all." Following Fangio home in his Maserati were Musso (Ferrari), Collins (Ferrari), Hawthorn (Ferrari), Schell (Maserati). Neither Vanwall finished. This puts Fangio on way to 5th world championship with 25 points against 7 each for Musso and Behra, 2nd in line.

RIVAL FOR MG HARDTOP

Production is underway in Australia (according to Australian Motor Manual) on a Fiberglas sports coupe based on Ford Zephyr chassis, powered by Zephyr engine. William Buckle, of Buckle Motors in Sydney, started his project 4 years ago, has driven prototype 30,000 miles. Front resembles Ferrari, fenders a D-Jag. Wheelbase is 94 ins. Seats two people, has jump seats also. Two fuel tanks provided. Motor Manual says "It cruises happily at 75 mph, will do 100 top, handles well and has immaculate road manners."

(cont'd next page)

AS WE GO TO PRESS

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NEW LLOYD ALEXANDER

Trying to combat sales resistance, new Lloyd Alexander has wind-up instead of sliding windows, external access to trunk, redesigned progressive-rate springing, and improved interior finish. At small extra cost, there's a four-speed all synchromesh gearbox instead of standard three-speed.

THE GAUNTLET IS DOWN!

Floyd Clymer, publisher of countless automotive books, has publicly labeled Juan Manuel Fangio as a "phony champion of the world" because he didn't drive at Monza against U.S. drivers. He challenged Fangio to appear at Indy in '58, offering him \$500 for entering, \$1000 to qualify, \$2500 if he finishes better than 5th in a U.S. race car, \$5000 if he finishes better than 5th in a foreign car. We hope Clymer's goading of Fangio works; it would make the 500 an interesting battle.

BEAUTIFUL BRUTE

Combining form and function has long been Raymond Loewy's strong point. His new sports car (below) embodies an Allard's brutishness and a Ferrari's sleekness. Built by body builders Pichon and Parat of Sens, France from a 1/8-scale model made by Loewy, it's not intended for mass production. Uses a BMW-507 chassis and 150-hp V8 engine that reportedly pushes it to 60 mph in seven seconds. Particularly good safety feature is an integral roll bar. We'll have more details and photos next month.



74 MOTOR TREND/SEPTEMBER 1957

UNDERGRADUATE ENDURANCE RUNS

A group of Cambridge Univ. undergraduates drove an Austin A-35 for



seven days and nights to seven international speed and duration records. Records set by the 950cc sedan were all at average speeds of 74-plus mph from four to seven days and up to 20,000 kms. Car was stock outside of 3.9 to 1 axle, 8.5 to 1 compression, larger carb, and oil cooler.

RUSSIAN "VOLGA"

With the accompanying publicity photo from Sovfoto came the following conditions: "Caption not to be distorted or factually changed" and "charge will be double if credit is omitted."



They didn't give many facts to distort. Caption said "Gorky street in Moscow. One of new Volga passenger cars is in the foreground." Credits they had a-plenty: "Printed in the U.S.S.R., Photo by N. Kuleshov, Fotoknronika Tass, Sovfoto."



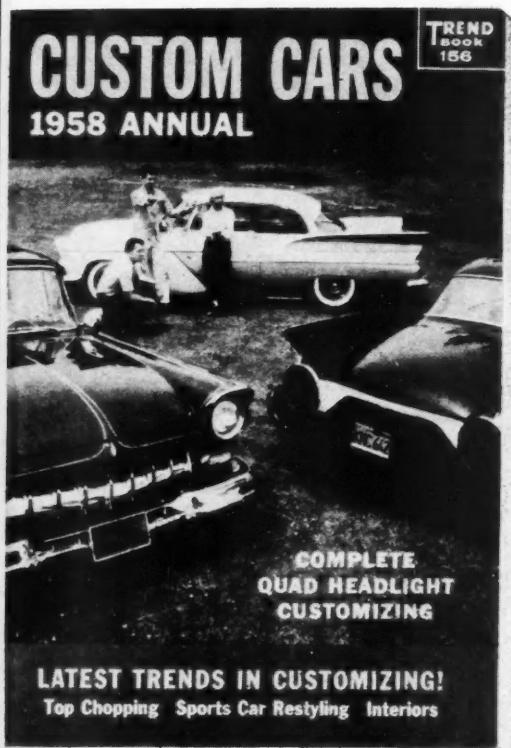
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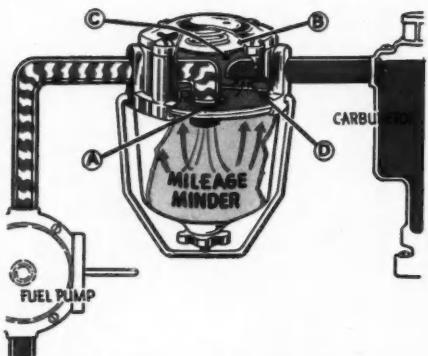
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Motor Trend, Sept.

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